ORDER NO. VSD9606M501A

⚠ **WARNING**
This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advice non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products deal with in this service manual by anyone else could result in serious injury or death.

# Service Manual

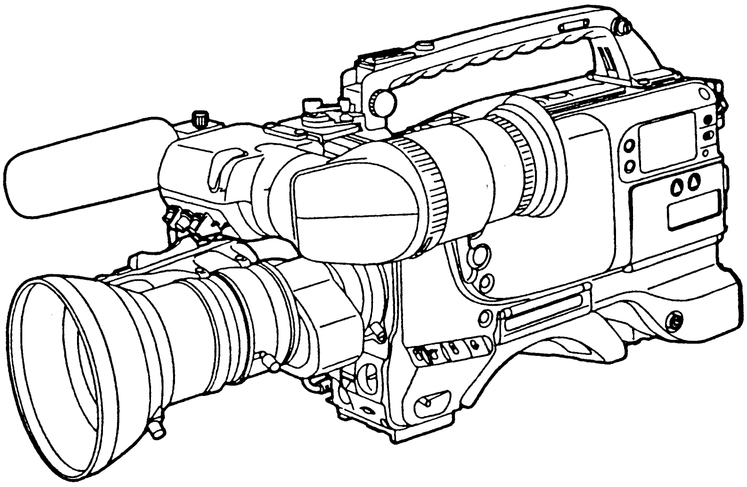
**Vol. 1**

DVCPRO

- *Sec. 1* *Operating Instructions*
- *Sec. 2* *Maintenance & Disassembly Procedures*
- *Sec. 3* *Mechanical Adjustments*
- *Sec. 4* *Electrical Adjustments*
- *Sec. 5* *Block Diagrams*
- *Sec. 6* *Exploded Views & Parts List*

## DVCPRO Camera Recorder

# AJ-D700E/EN



**Panasonic**

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# INTRODUCTION

This service manual contains technical information which allow service personnel to understand and service the DVCPRO Camera Recorder AJ-D700E,EN.

## Specifications

### General

| | |
|---|---|
| **Power supply voltage:** | DC 12 V |
| **Power consumption:** | 24 W |

| | |
|---|---|
| **Operating temperature:** | 0°C to 40°C |
| **Storage temperature:** | −20°C to 60°C |
| **Operating humidity:** | Less than 85% (relative humidity) |
| **Continuous operating time:** | Approx. 90 min. (using 1 Anton Bauer Trimpak 14 battery) |
| **Weight:** | Approx. 5.85 kg (incld. main unit, viewfinder, lens, battery pack, tape and microphone) |
| **Dimensions (W×H×D):** | 119.2×255.5 (includ. handle)×326.3 mm |

### Camera Section

| | |
|---|---|
| **Pick-up devices:** | 1/2-inch on-chip FIT type of CCD |
| **System:** | RGB 3-CCD system |
| **Picture elements:** | 480,000 pixel |
| **Spectral system:** | F1.4 prism system |
| **Built-in filters:** | 1; 3200K<br>2; 5600K+1/4 ND<br>3; 5600K<br>4; 5600K+1/16 ND |
| **Quantization:** | 10-bit A/D (R, G and B channels), 14.4 MHz |
| **Digital signal processing:** | 16-bit long operation, 14.4 MHz/28.8 MHz |
| **Programmable gains:** | 3 positions can be set from among −3, 0, 3, 6, 9, 12, 15, 18, 21, 24 and 30 dB. |
| **Shutter speeds:** | 1/60, 1/120, 1/250, 1/500, 1/1000 and 1/2000 sec.<br>Synchro scan mode; 1/29.9–1/47.6 sec., 1/51.5–1/252.0 sec. |
| **Lens mount:** | 1/2″ Bayonet type |
| **Sensitivity:** | F8 (2000 lux, 89.9% reflection) |
| **Minimum subject brightness:** | 2 lux (F1.4, +30 dB) |
| **Image S/N ratio:** | 60 dB (typical) |
| **Horizontal resolution:** | 750 lines (centre) |
| **Vertical resolution:** | 450 lines (normal mode)/500 lines (Super V mode) |
| **Registration:** | Below 0.03% (entire range) (excld. lens) |
| **Geometric distortion:** | Below measurable limit (excld. lens) |

### Viewfinder

| | |
|---|---|
| **CRT:** | 1.5 type monochrome |
| **Resolution:** | 600 lines (centre) |

# Specifications

## VTR Video System (during playback on a standard playback unit)

**Bands:** Brightness; 25 Hz to 5.75 MHz +1.0 dB/−3.0 dB
**S/N ratio:** 55 dB
**K factor (2T pulse):** Within 2%
**Y/C delay:** Within 20 ns

## VTR Audio System (during playback on a standard playback unit)

**Sampling frequency:** 48 kHz (synchronized to video)
**Quantization:** 16-bits/sample
**Frequency response:** 20 Hz to 20 kHz±1.0 dB (at reference level)
**Dynamic range:** 85 dB or more (at 1 kHz, AWTD)
**Distortion:** Within 0.1% (at 1 kHz, operating level)
**Wow/flutter:** Below measurable limit
**Head room:** 18 dB
**Emphasis:** T1=50 µs, T2=15 µs (can be turned ON/OFF)

## VTR Tape Running System

**Tape speed:** 33.854 mm/s
**Recording/playback time:** Approx. 63 min. (using the AJ-P63MP)
**FF/REW time:** Approx. 3 min. (using the AJ-P63MP)

## Connectors

### Input

**AUDIO IN CH1/CH2 (XLR, 3-pin, male):** MIC/LINE switchable
MIC; Menu setting to −60/−50/−40 dBu
LINE; Menu setting to −6/0/+4 dBu
**MIC IN (XLR, 3-pin, female):** Menu setting to −60/−50/−40 dBu, balanced 3 kohm
**GENLOCK IN (BNC):** 1.0 Vp-p, 75 ohm
**TIME CODE IN (12-pin):** 0.5 to 18 Vp-p, 10 kohm

### Output

**CAMERA OUT (BNC):** 1.0 Vp-p, 75 ohm
**VIDEO OUT (BNC):** 1.0 Vp-p, 75 ohm
**AUDIO OUT (XLR, 3-pin, female):** 0 dBu, balanced, low-impedance
(Menu setting to CH1/CH2/MIX)
**AUDIO CH1/CH2 OUT (12-pin, TC IN/OUT combined):** −20 dBu, unbalanced, low-impedance
**VTR (26-pin, option):**
**TIME CODE OUT (12-pin):** 1.0 Vp-p, 75 ohm
**PHONES (mini-jack×2):**

### Other

**DC IN (XLR, 4-pin, male):** DC 11 to 17 V
**DC OUT (4-pin):** DC 11 to 17 V, maximum rated current; 0.1 A
**LENS (12-pin):**
**REMOTE (ECU, 6-pin):**
**(for AJ-D700EN)**

## Accessories

Shoulder belt (1)
Sony battery connector, NP-1 screw
Video input connector (1)

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

## Power supply related

AU-BP220, AU-BP402 battery packs
AG-B425 battery charger (for charging the AU-BP220 and AU-BP402 battery packs)
AU-M402H battery case
AU-B110 AC adaptor

## Video cassette tapes

AJ-P6MP, AJ-P12MP, AJ-P23MP, AJ-P33MP, AJ-P63MP metal tapes

## Viewfinder

5-inch viewfinder

## External VTR-related

Portable video cassette recorder
AJ-YA710P time code input/output/video input adaptor
AJ-YA700P 26-pin output connector (for connecting an external VTR to the 26-pin interface)
AQ-EC1 extension control unit (for AJ-D700EN)
Connection cables

- for connecting an external VTR to the 26-pin interface
- for connecting an external VTR to the 14-pin/26-pin interface
- SHAN-C12TCA multi connector cable (complementary)

## Audio components

AJ-MC700P microphone kit
Stereo microphone
AJ-MH700P microphone holder
WX-RA700 wireless receiver
WX-R980 camera attachment

## Maintenance products

AJ-CL12MP cleaning tape
AJ-SC700 soft carrying case
SHAN-B700 carrying case (complementary)
SHAN-RC700 rain cover (complementary)

# SAFETY PRECAUTIONS

## GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

## LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohm meter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1 MΩ and 5.2MΩ.
   When the exposed metal dose not have a return path to the chassis, the reading must be ∞.

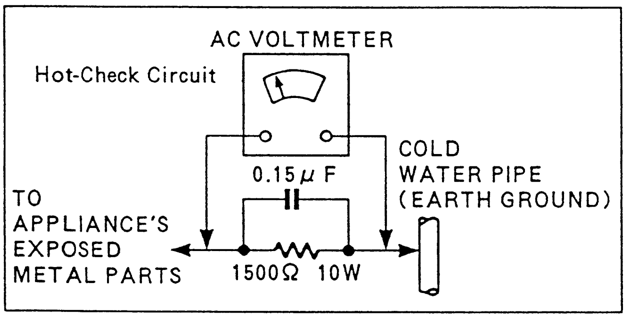

Figure 1

## LEAKAGE CURRENT HOT CHECK (See Figure 1)

1. Plug the AC cord directly into the AC outlet.
   Do not use an isolation transformer for this check.
2. Connect a 1.5KΩ, 10W resistor, in parallel with 0.15μ F capacitor, between each exposed metallic part on the set an a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

## ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground.
   Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless mother such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

## X-RADIATION

**WARNING**

1. The potential source of X-Radiation in EVF sets is the High Voltage section and the picture tube.
2. When using a picture tube test jig for service, ensure that jig is capable of handling 10kV without causing X-Radiation.

**NOTE:** It is important to use an accurate periodically calibrated high voltage meter.

3. Measure the High Voltage. The meter (electric type) reading should indicate 2.5kV, ± 0.15kV. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure. To prevent an X-Radiation possibility, it is essential to use the specified picture tube.

# For your safety

- **DO NOT REMOVE PANEL COVER BY UNSCREWING.**
  To reduce the risk of the electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

## WARNING:

**TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.**

## CAUTION:

**TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.**

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### Lithium Battery

**Warning**

The lithium battery in this equipment must only be replaced by qualified personnel. When necessary, contact your local Panasonic supplier.

"The lithium battery is a critical component (type number CR2032 manufactured by Panasonic).

It must never be subjected to excessive heat or discharge. It must therefore only be fitted in equipment designed specifically for its use.

Replacement batteries must be of the same type and manufacturer. They must be fitted in the same manner and location as the original battery, with the correct polarity connections observed.

Do not attempt to re-charge the old battery or re-use it for any other purpose. It should be disposed of in waste products destined for burial rather than incineration."

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera använt batteri enligt fabrikantens instruktion.

ADVARSEL!

Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type. Levér det brugte batteri tilbage til leverandøren.

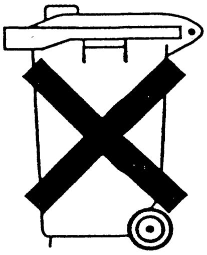
VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

## Attention/Attentie

- This apparatus contains a lithium battery for memory back-up.
- For the removal of the battery at the moment of the disposal at the end of the service life please consult your dealer.
- Do not throw away the battery. Instead, hand it in as hazardous waste.

- Dit apparaat bevat een lithiumbatterij voor memory back-up.
- Raadpleeg uw leverancier over de verwijdering van de batterij op het moment dat u het apparaat bij einde levensduur afdankt.
- Gooi de batterij niet weg, maar lever hem in als KCA.



vol.1

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**Section 1. Operating Instructions**

**Section 2. Maintenance & Disassembly Procedures**
*This section includes maintenance chart, replacement parts location, sensors location, jig & tools, P.C.boards location, alignment tapes, service menu, disassembly procedures ,major parts replacement, emergency eject, cleaning procedures, and auto off information .*

**Section 3. Mechanical Adjustments**
*This section includes LISTA adjustments.*

**Section 4. Electrical Adjustments**
*This section includes setup of EVR tool and the adjustments which need EVR tool and B.E.R.counter.*

**Section 5. Block Diagrams**
*Each block diagram has a brief description.*

**Section 6. Exploded Views & Parts List**
*This section includes AJ-YA700P and AJ-YA710P.*

# SECTION 1

# OPERATING INSTRUCTIONS

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**Bold letters should be set or adjusted immediately after purchase.**

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# General and Features

The model AJ-D700 integrates a colour video camera which employs three frame interline transfer (FIT) CCDs with 480,000 device on-chip lenses with a DVCPRO format VTR which is equipped with the latest compression technology.
The AJ-D700 is particularly compact and light weight with low power consumption, and realizes the optimal functions and performance for an electronic news gathering (ENG) VTR-integrated camera such as high picture quality and sensitivity, mobility, dustproofing and dampproofing, etc.
In addition, both the camera section and the VTR employ a digital signal processing system which further improves picture quality and realizes a system for controlling setting menu and subject data by using world standard memory cards.

## Camera Section Features

The camera section of the AJ-D700 has the following features.
- High sensitivity: 2000 lux (F8)
- High S/N ratio: 60 dB (standard)
- Ultra-low smear
- Ultra-low flare

**Digital signal processing**
Signal processing is digitized by a 14.4 MHz/28.8 MHz (typ.) 10-bit AD/DA converter. This improves picture quality, stability and reliability, and allows the viewfinder screen displays as well as numerous adjustment and setup items to be converted to menus.

**Setting menu**
The setting menu is displayed on the viewfinder screen, and controls the status displays, messages, marker displays, etc. Whether or not to display each item, as well as the display conditions when items are to be displayed, can be selected according to the user's convenience. For example, display ON/OFF for the ! lamp display which informs the user that the unit has entered irregular status can be selected for 7 different conditions.
The setting menu is also used to select various settings and functions and execute memory card operations, etc.

**Setup cards**
Setting menu and subject data can be stored on SRAM memory cards with a capacity of 64 kilobytes or greater which conform to PCM CIA standard ratings as setup cards. Stored data can be saved individually or according to the shooting conditions, allowing the same setup conditions to be easily reproduced and assisting in standardizing setup conditions between individual data.

**High-function electronic shutter**
Using the built-in electronic shutter achieves steady images even of quickly moving subjects. In addition, the following special operation modes can also be selected.
- Synchro scan mode: This mode is suited for shooting personal computer and workstation monitor screens, and provides images with little horizontal stripe noise.
- High vertical resolution (Super V) mode: This mode provides images with high vertical resolution compared to standard mode.

**Wide range of video gain selections**
Eleven gain values can be selected from −3 dB to +30 dB using the setting menu and the GAIN switch. The high S/N ratio allows images with little noise to be obtained even when the gain is increased for shooting in dark locations.

**Automatic adjustment and memory functions for black balance/white balance**
The black set, black balance and white balance can be automatically adjusted by simple switch operations. Adjustment values are held in the memory even if the power for the unit is turned off, so there is no need to readjust the balance each time the power is turned on.
There are two memory systems for white balance which can hold four adjustment values each for the CC and ND filters, making a total of eight adjustment values. When adjustment values matching the illumination conditions are selected from among the values stored in the memory, the unit is automatically adjusted to the corresponding white balance. (A menu setting also allows adjustment of only two values instead of the values for each filter.) In addition, when the unit is shipped from the factory, the white balance value for 3200K is stored in the memory as a preset value. This value can be called when there is no time to adjust the white balance, etc.

# Features

**High-performance viewfinder**
- The high-resolution CRT projects a detailed picture which facilitates focus operations.
- The viewfinder employs a low flare CRT which makes the screen easy to see.
- A centre marker which indicates the centre of the screen and a safety zone marker which indicates the effective screen region can be displayed by menu operations.
- A large aperture allows the screen to be easily seen even when the operator's eye is removed from the eyepiece.
- The eyepiece can easily be detached. When the eyepiece is detached, the centre of the screen will not become blurred even when viewed from a distance. This also facilitates the removal of dust which has adhered to the CRT screen and mirror.
- One-touch position adjustment is possible not only in the right-left direction but also in the forward-backward direction.

**Character display function**
The unit is equipped with a function that displays switch settings, the automatic adjustment status for black balance and white balance, warning displays, etc. on the viewfinder screen.
In addition, when using an Anton Bauer Digital Magnum series battery as the unit's power supply, the remaining battery level can be displayed numerically on the viewfinder screen.

**Warning system for displaying the VTR section status**
The unit informs of VTR trouble, the end of the tape, battery wear, etc. with various warning lamps and a warning tone. The remaining tape time can also be checked by the character display inside the viewfinder.

**Four filter disks as standard equipment**
CC (colour temperature conversion) and ND (neutral density) filters are provided as standard equipment. This allows the optimal filter setting to be selected from among four combinations in accordance with the brightness of the subject.

**Fine adjustment of the automatic iris reference value**
The reference value for automatic iris adjustment can be finely adjusted by setting menu operations.

**Auto close function**
The unit is equipped with an auto close function which automatically closes the lens in the following cases.
- When the black balance is automatically adjusted.
- When the power is turned off in the auto iris mode.

**Generation of EBU colour bar and reference audio signals**
The camera section contains a circuit which generates an EBU type colour bar signal to facilitate colour monitor adjustments, and a circuit which generates a reference level audio signal to facilitate audio level adjustments.

**Functions and circuits for assuring high picture quality**
The AJ-D700 is equipped with the following functions (and circuits) in order to assure high picture quality and is designed to make the fullest use of the advantages of the high-performance CCD.
- A built-in AUTO KNEE circuit achieves a wide dynamic range which allows large signals to pass through.
- A built-in 2-line image enhancer
- A built-in shading compensation function for use with a lens extender
- A built-in sawtooth wave generator for adjustments
- A zebra pattern ON/OFF selector switch which selects three types of zebra patterns including spot zebra from two levels of zebra patterns.

**Audio functions**
- A phantom power supply type super-cardioid microphone (option) can be attached and it can also be detached from the main unit for use in interviews.
- Microphone can also be connected, and can be attached to the main unit using the AJ-MH700P microphone holder (option).
- The audio CH1 recording level can be easily adjusted at the front panel of the unit.

**Recording by an external VTR**
When an external VTR is connected using the 26-pin output adaptor (option, AJ-YA700P), recording can be performed by the external VTR instead of the internal VTR.

**Remote control (for AJ-D700EN)**
Connecting the Extension Control Unit (option, AQ-EC1) allows a portion of the camera section functions to be operated by remote control.

# Features

## Features of the VTR section

**Digital system**
The VTR section features a component digital recording system that employs the latest compression technology and non-compressed PCM recording for audio. This system provides superior S/N, frequency band and waveform characteristics as well as reproduction of detailed areas, etc., and realizes even higher picture and sound quality.

**Rec review function**
This function automatically rewinds the tape and plays back the last two seconds recorded, allowing recorded contents to be quickly checked.

**Playback function**
Playback pictures (black-and-white pictures) can be seen on the viewfinder screen. In addition, colour playback pictures can be seen on a colour monitor connected to the VIDEO OUT connector on the main unit.

**Built-in time code generator/reader**
Time code information can be recorded and played back on a dedicated subcode track.

**Locking of the time code to an external source**
The built-in time code generator can be locked to an external generator. Also, the built-in time code generator uses a lithium battery as its back-up power supply, allowing time codes to be backed up for approximately one year even if power is not supplied to the unit.

**Built-in DOLBY NR System***
A Dolby B Noise Reduction System is built in for audio recording in the longitudinal direction.

**Successive shooting**
Images can be shot successively within an accuracy of ±1 frame can be performed simply by pressing the VTR START button or the lens VTR button.

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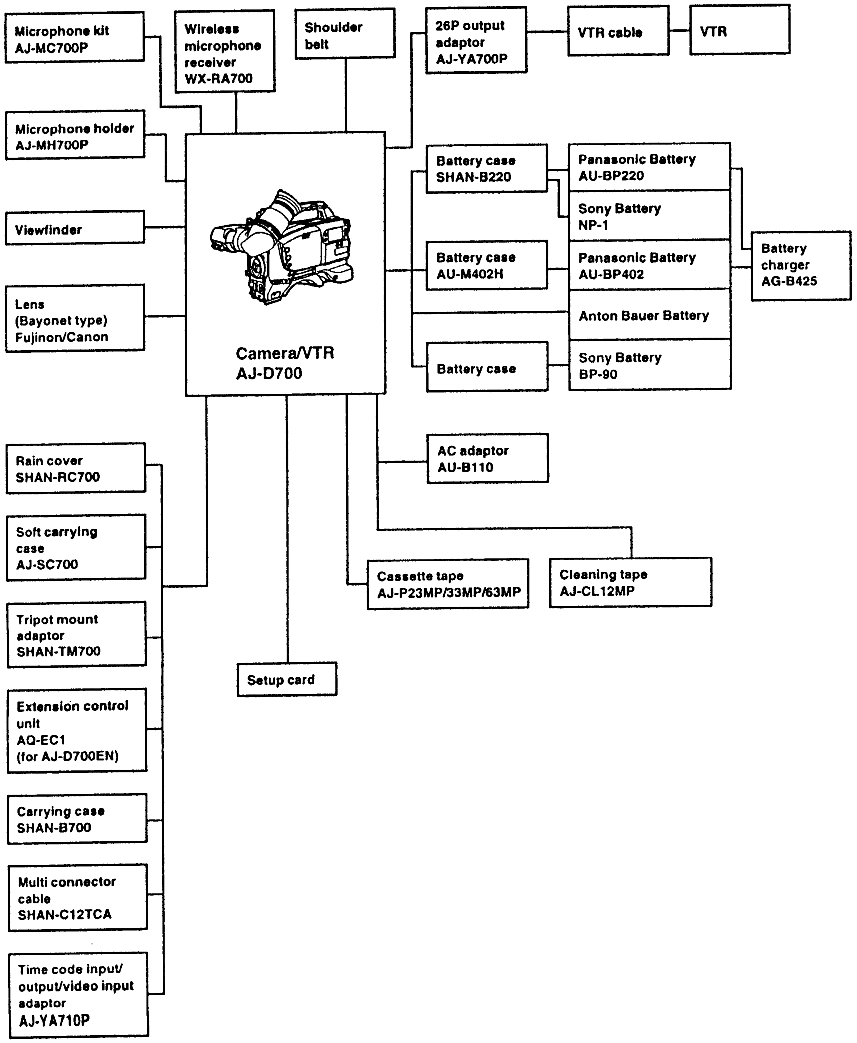
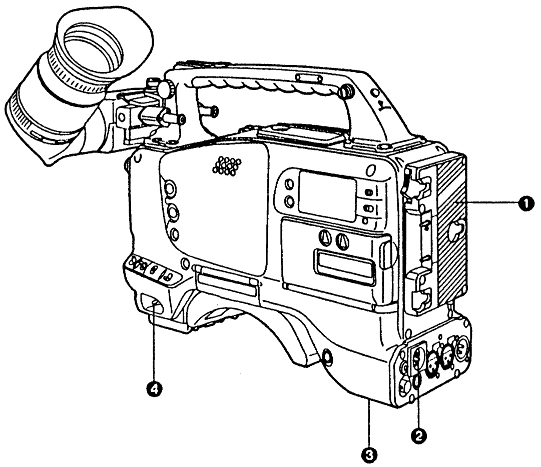
*Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol ＤＤ are trademarks of Dolby Laboratories Licensing Corporation.

## System Configuration



Microphone kit AJ-MC700P
Wireless microphone receiver WX-RA700
Shoulder belt
26P output adaptor AJ-YA700P
VTR cable
VTR
Microphone holder AJ-MH700P
Viewfinder
Lens (Bayonet type) Fujinon/Canon
Camera/VTR AJ-D700
Battery case SHAN-B220
Panasonic Battery AU-BP220
Sony Battery NP-1
Battery case AU-M402H
Panasonic Battery AU-BP402
Anton Bauer Battery
Battery case
Sony Battery BP-90
Battery charger AG-B425
AC adaptor AU-B110
Rain cover SHAN-RC700
Soft carrying case AJ-SC700
Tripot mount adaptor SHAN-TM700
Extension control unit AQ-EC1 (for AJ-D700EN)
Carrying case SHAN-B700
Multi connector cable SHAN-C12TCA
Time code input/ output/video input adaptor AJ-YA710P
Cassette tape AJ-P23MP/33MP/63MP
Cleaning tape AJ-CL12MP
Setup card

## Controls and Their Functions



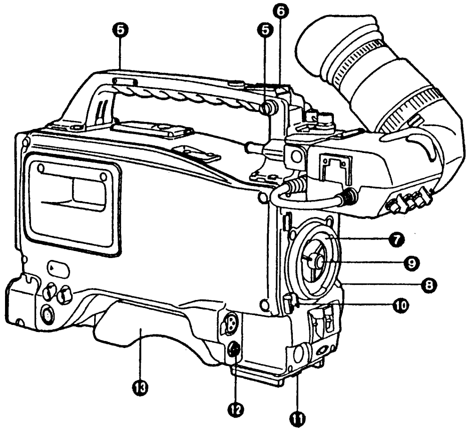
### Power Supply Section

❶ **Battery holder**
The battery pack (option) made by Anton Bauer is mounted onto this holder.

❷ **DC IN (external power input) connector (XLR, 4P)**
The AU-B110 AC adaptor (option) is plugged into this socket when the unit is to be operated by AC power. An external battery is plugged in when an external battery is to be used to operate the unit.

❸ **BREAKER (circuit breaker) button**
In order to protect the equipment, the circuit breaker is tripped and the power is automatically turned off when an excessively high level of power flows inside. Upon completion of the internal inspection and adjustments, push this button back in. The power will come back on provided that there is no trouble inside the unit.

❹ **POWER switch**
**ON:** Set to this position to turn on the unit's power.
**OFF:** Set to this position to turn off the unit's power.



## Accessory Mounting Section

⑤ **Hook for mounting shoulder belt**
Attach the accessory shoulder belt to this hook.

⑥ **Light shoe**
Mount the video light, etc. onto this shoe.

⑦ **Lens mount (bayonet type)**
Mount the lens here.

⑧ **Lens clamping lever**
Insert the lens into the lens mount ⑦, and turn the lens mount ring using this lever to clamp the lens.

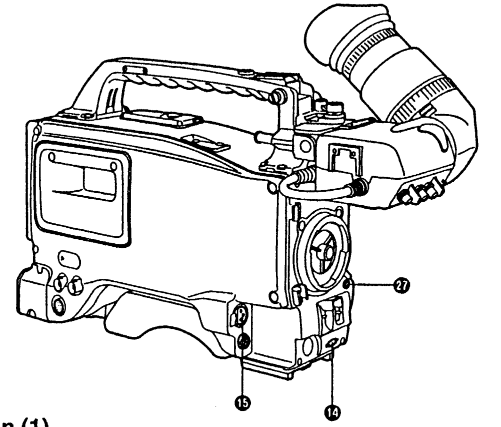
⑨ **Lens mount cap**
Press up the lens clamping lever ⑧ to remove this cap. Keep the cap in place if the lens is not going to be mounted.

⑩ **Lens cable clamp**
This is for clamping the lens cable.

⑪ **Tripod mount**
When the unit is to be secured to a tripod, mount the optional tripod attachment.

⑫ **LENS connector (12-pin)**
Hook up the lens connecting cable to this connector. Consult with your dealer concerning the lens which you are going to use.

⑬ **Shoulder pad**
Adjust this pad to facilitate operation when carrying the unit on your shoulder. Its position can be brought forward or backward and adjusted by loosening the two set screws.



## Audio Function Section (1)

⑭ **AUDIO LEVEL CH1 (audio channel 1 recording level) control**
When the AUDIO SELECT CH1/CH2 switch ⑰ is set to MAN, the recording level of audio channel 1 can be adjusted by this control in addition to the AUDIO LEVEL CH1 control ⑯ on the side panel.

⑮ **MIC IN (microphone input) jack (XLR, 3-pin)**
Connect an optional microphone to this jack. The power for the microphone is supplied from this jack.

## Audio Function Section (2)

⑯ **AUDIO LEVEL CH1/CH2 (audio channel 1/2 recording level) controls**
When the AUDIO SELECT CH1/CH2 switch ⑰ is set to MAN, the audio level of audio channels 1 and 2 can be adjusted using these controls.
However, the audio CH1 level can also be adjusted using the AUDIO LEVEL CH1 control ⑭ on the front panel.

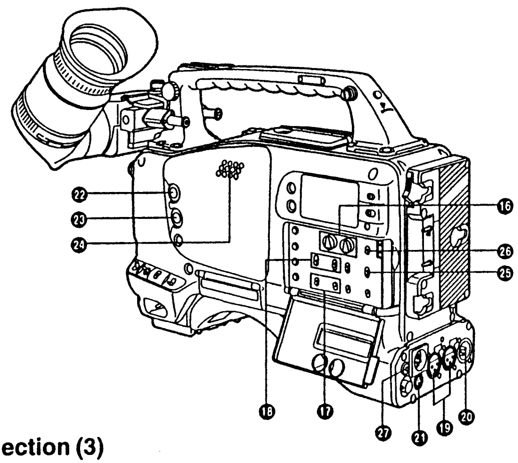
⑰ **AUDIO SELECT CH1/CH2 switch (audio channel 1/2 auto/manual level adjustment selector) switch**
This selects the method used to adjust the audio levels of audio channels 1 and 2.
AUTO: For adjusting the levels automatically.
MAN: For adjusting the levels manually.

⑱ **AUDIO IN (audio input selector) switch**
This selects the input signals to be recorded on audio channels 1 and 2.
FRONT [MIC]: The microphone input signals connected to the MIC IN jack ⑮ are recorded.
REAR [MIC]: The microphone input signals connected to the AUDIO IN CH1/CH2 connectors ⑲ are recorded.
REAR [LINE]: The line input signals connected to the AUDIO IN CH1/CH2 connectors ⑲ are recorded.

⑲ **AUDIO IN CH1/CH2 (audio input channel 1/2) connectors (XLR, 3P)**
An audio component or microphone is connected here.

⑳ **AUDIO OUT connector (XLR, 3P)**
This is connected to an audio component. The audio channels can be selected on the setting menu.

㉑ **DC OUT (DC power output) connector**
This is the DC 12 V output connector. A current of approximately 100 mA can be taken out.



## Audio Function Section (3)

**㉒ ALARM (warning tone volume) control**
This adjusts the warning tone volume heard from the speaker ㉔ or the earphone connected to the PHONES jack ㉗. When it is set to the lowest position, the warning tone is not audible. However, by making changes to the inside parts, the tone can be made audible even when the control is at its lowest position.

**㉓ MONITOR (volume) control**
This adjusts the volume of the sound other than the warning tone—the sound from the speaker ㉔ or earphone ㉗. When it is set to the lowest position, no sound is heard.

## Audio Function Section (4)

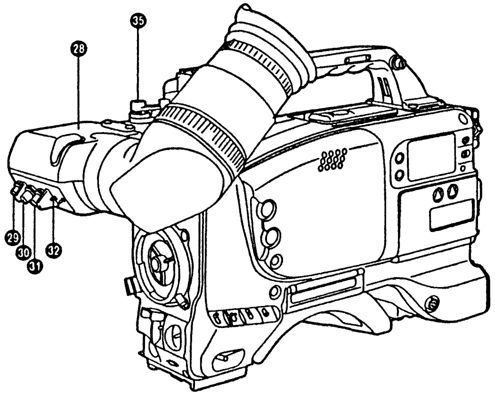
**㉔ Speaker**
During recording, the EE sound can be monitored; during playback, the playback sound can be monitored.
The warning tone is heard through the speaker in synchronization with the flashing or lighting of the warning lamp and warning display.
The speaker sound is automatically muted when an earphone is connected to the PHONES jack ㉗.

**㉕ MONITOR SELECT (audio channel selector) switch**
This selects the audio channel whose sound is to be heard through the speaker ㉔ or earphone.

| | |
|---|---|
| **CH1:** | The audio channel 1 sound is output. |
| **CH1, 2:** | The sound produced by mixing the audio channel 1 and 2 sound or the stereo sound is output. However, only the mixed sound is output from the speaker ㉔. |
| **CH2:** | The audio channel 2 sound is output. |

**㉖ MONITOR (sound selector) switch**
This selects the sound of the earphone when CH1, 2 is selected with the MONITOR SELECT switch ㉕.

**㉗ PHONES (earphone) jack (mini-jack)**
When an earphone (option) is connected to this jack, the sound selected by the MONITOR switch ㉖ can be heard. The warning tones relating to the unit's operation or status can also be heard. An earphone enabling a sufficiently high volume of sound to be heard is recommended. When the earphone is connected, speaker ㉔ sound is automatically muted.



## Shooting (Recording)/Playback Function Section (1)

**㉘ Viewfinder**
Black-and-white images can be seen in the viewfinder during recording and playback. Warnings and messages relating to the unit's operating status and settings, zebra pattern, markers (safety zone marker, centre marker), etc. can also be seen.

**㉙ PEAKING control**
This is used to adjust the contours of the images inside the viewfinder to facilitate focusing. It does not affect the camera's output signals.

**㉚ CONTRAST control**
This is used to adjust the contrast of the screen inside the viewfinder. It does not affect the camera's output signals.

**㉛ BRIGHT control**
This is used to adjust the brightness of the screen inside the viewfinder. It does not affect the camera's output signals.

**㉜ ZEBRA (zebra pattern) switch**
This displays the zebra pattern inside the viewfinder.
**ON:** The zebra pattern is displayed.
**OFF:** The zebra pattern is not displayed.
When the unit is shipped from the factory, the zebra pattern is set in such a way that those parts with an video level from approx. 70% to 85% are displayed. The displaying of parts with a level ranging from 50% to 110% or more or with a certain level can also be set on the setting menu.

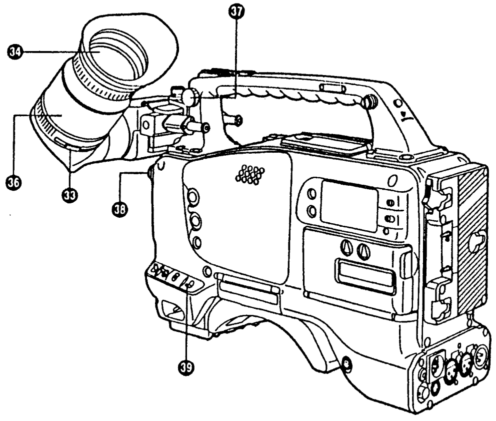
**㉝ Diopter control knob**
This is adjusted in such a way that the images on the viewfinder screen are seen most clearly in accordance with the dioptric power of the camera's operator.

**㉞ Eye cup**

**㉟ Viewfinder forward-backward/left-right position clamp lever**
Loosen this lever to adjust the position of the viewfinder ㉘ in the forward-backward or left-right direction.

**㊱ Eyecup forward-backward movement ring**
Turn this ring to adjust the position of the eyecup ㉞ in the forward-backward direction.

**㊲ Viewfinder stopper screw**
To detach the viewfinder ㉘ from the camera, loosen this screw and then detach the viewfinder.



## Shooting (Recording)/Playback Function Section (2)

**㊳ CC/ND FILTER (filter selector) knob**

This selects the filter to match the light source which is illuminating the subject.

If the setting of this knob is changed when the menu display mode has been set to "3" (default setting), the new setting will appear for about 3 seconds on the setting change message display area of the viewfinder screen.

- **The knob and filter settings are listed below.**

| FILTER knob setting | Description |
|---|---|
| 1 | 3200K |
| 2 | 5600K+1/4ND |
| 3 | 5600K |
| 4 | 5600K+1/16ND |

- **Examples of filter settings to match shooting conditions**

| Filter | Shooting condition |
|---|---|
| 1 | Sunrise, sunset, inside a studio |
| 2 | Outdoors under a clear sky |
| 3 | Outdoors under a cloudy or rainy sky |
| 4 | Snow scenes, high mountains, coastlines and other extremely clear and bright scenes |

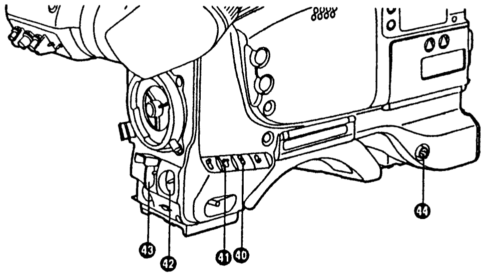
**㊴ WHITE BAL (white balance memory selector) switch**

**PRST:** Set to this position when there is no time to adjust the white balance. The white balance value for 3200K is stored in the memory.

**A or B:** When the AUTO W/B BAL switch ㊷ is pressed to the AWB side, the white balance is automatically adjusted in accordance with the setting position of the filter knob ㊳, and the adjustment value is stored in memory A or memory B.

When the FILTER knob and the WHITE BAL switch are set to the same positions as the ones set when the adjustment was made, the adjustment value stored in the memory is called, and the unit is automatically adjusted to the white balance which corresponds to this value.

If the setting of this switch is changed when the menu display mode has been set to "3" (default setting), the new setting will appear for about 3 seconds at the WHITE BAL switch display position on the viewfinder screen. (Example: "W : A")



## Shooting (Recording)/Playback Function Section (3)

**㊵ OUTPUT (output signal selector)/AUTO KNEE switch**

This switch selects the video signals which are to be output from the camera unit to the VTR unit, viewfinder and video monitor. The AUTO KNEE function can be used when the images shot by the camera have been selected.

- **OUTPUT/AUTO KNEE switch setting positions**

| | |
|---|---|
| BARS | Colour bar signals are output. The AUTO KNEE circuit is not activated. Set the switch to this position in the following cases:<br>• When adjusting the video monitor<br>• When recording colour bar signals |
| CAM, AUTO KNEE OFF | The images shot by the camera are output.<br>The AUTO KNEE circuit is not activated. The default setting is "MANUAL KNEE". |
| CAM, AUTO KNEE ON | The images shot by the camera are output.<br>The AUTO KNEE circuit is activated. |

**㊶ GAIN (gain selector) switch**

This is used to change the video amplifier's gain in accordance with the lighting conditions during shooting. The gain values corresponding to the L, M and H settings are assigned beforehand on the setting menu. When the unit is shipped from the factory, these settings are: L=0 dB, M=9 dB and H=18 dB.

If the setting of this switch is changed when the menu display mode has been set to "3", the new setting will appear for about 3 seconds at the gain display position on the viewfinder screen. (Example: "12 dB")

**㊷ AUTO W/B BAL (white balance/black balance automatic adjustment) switch**

**AWB:** Set to this position for automatically adjusting the white balance. When the WHITE BAL switch ㊴ is now set to "A or B", the adjusted value will be stored in memory A or memory B.

**ABB:** Set to this position for automatically adjusting the black balance. The adjusted value will be stored in the dedicated memory.

**㊸ SHUTTER switch**

Set this to ON when using the electronic shutter. When it is pressed to the SEL side, the shutter speed and mode displays change in the ranges preset on the setting menu. If the setting of this switch is changed when the menu display mode has been set to "2" or "3", the new settings will appear for about 3 seconds at the shutter display position on the viewfinder screen. (Example: ":1/252", ":1/51.5")

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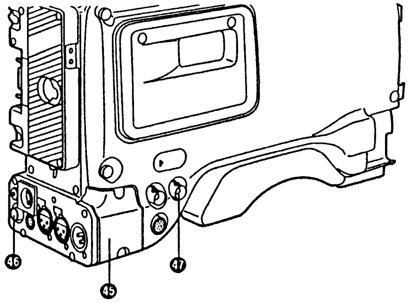
1) **AUTO KNEE function**

When the level is adjusted to people, scenes, etc. for shooting against a very bright background, the background will be whited out and the buildings or scenes in the background will become blurred. If the AUTO KNEE function is activated in cases like these, the background can be reproduced in clear detail. This function is especially effective for shooting in the following conditions:

- When shooting people in shade under a clear sky
- When simultaneously shooting people in vehicles or indoor and the outdoor scenery seen through the windows
- When shooting scenes with a high contrast



㊹ **ECU REMOTE (remote control) connector (6-pin) (For AJ-D700EN)**
Connect the AQ-EC1 extension control unit (option) here.
<Note>
The POWER switches on unit and extension control unit must be set to OFF before the remote control cable is connected or disconnected.

㊺ **VIDEO IN connector (accessory)/26-pin output adaptor (option) mount**
**VIDEO IN connector (accessory)** (See below for the mounting method.)
The composite video signals are supplied here. It is used for checking the return signal.
**26-pin output adaptor (option)** (See page 98 for mounting method.)
The 26-pin output adaptor AJ-YA700P (option) is mounted on this section. When the portable VTR is connected as the external VTR, recording can be performed simultaneously with the unit's built-in VTR.

㊻ **VIDEO OUT connector (BNC)**
This outputs the video signals (75Ω termination, rated level) to be monitored. During recording, EE images can be monitored; during playback, playback images can be monitored.
While performing settings on the menu, the setting menu can be superimposed onto the shot images appearing on the monitor screen so that the settings can be checked (in which case, the images appear in black and white).

㊼ **CAM OUT (camera output) connector (BNC)**
This outputs the composite video signals (75Ω termination, rated level). When a video monitor is connected, the images shot by the camera can be monitored. Even while the VTR is playing back, the camera's images are output at all times.

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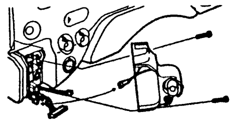
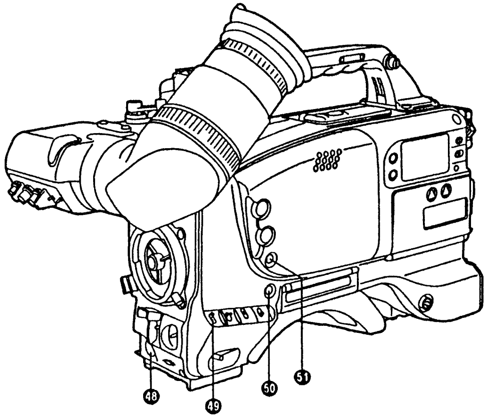
**Mounting the VIDEO IN connector**

Remove the blank panel and mount the VIDEO IN connector.



Connect the 2P connector.



## Shooting (Recording)/Playback Function Section (4)

㊽ **VTR START button**
When this pressed, recording commences; when it is pressed again, recording stops. This button has the same function as the VTR button on the lens side.

㊾ **VTR SAVE/STBY (tape protection) switch**
This selects the power supply status while the VTR recording is temporarily stopped (REC PAUSE).

| | |
|---|---|
| **SAVE:** | This is the tape protection mode. The cylinder is stopped in the half-loading status. Compared with the STBY position, less power is consumed and the unit can be operated longer using the battery. It takes longer for recording to commence after the VTR START button ㊽ is pressed in the SAVE position than in the STBY position.<br>When the switch is set to this position, the VTR SAVE lamp inside the viewfinder lights. |
| **STBY:** | Recording commences immediately when the VTR START button is pressed. |

㊿ **MODE CHECK button**
While this button is kept depressed, the camera's setting status is displayed in the viewfinder. It does not affect the camera's output signals. This button can also be used for fine adjustment at the setting menu during synchro scan mode.

(51) **SUPER IRIS button**
This is used when backlight compensation is to be provided. When it is pressed, the switch settings are displayed inside the viewfinder for 3 seconds. When it is pressed again, backlight compensation is released.
Whether the super gain (30 dB) mode or the super iris (backlight compensation) mode is to apply can be selected on the setting menu. This button can also be used for fine adjustment during synchro scan mode.

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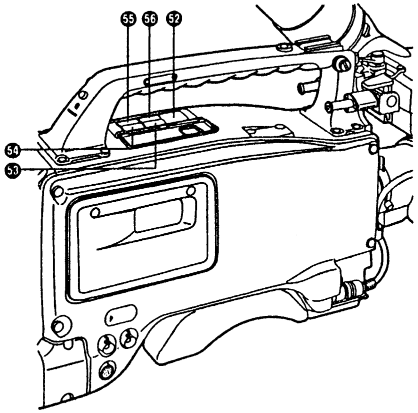
**Super gain:** When 30 dB is allotted to the SUPER IRIS button, DTL and other menu settings cannot be performed for this 30 dB.



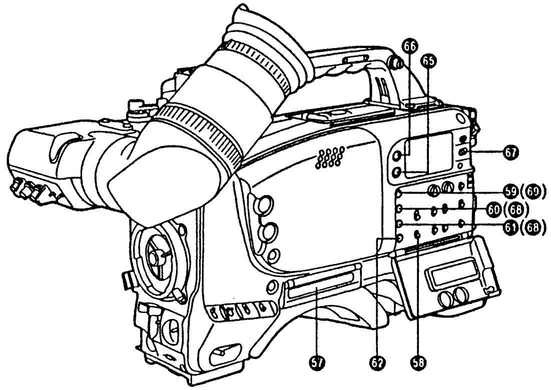
**(52) EJECT (cassette eject) button**
Press this to insert or eject the cassette.

**(53) REW (rewind) button**
Press this to rewind the tape. Its lamp lights during rewinding.
If this button is pressed during playback, the playback images are rewound at approximately quadruple speed while the button is held down.

**(54) FF (fast forward) button**
Press this to fast forward the tape. Its lamp lights during fast forwarding.
If this button is pressed during playback, the playback images are fast forwarded at approximately quadruple speed while the button is held down.

**(55) PLAY (playback) button**
Press this to view the playback images on the viewfinder screen or colour video monitor. Its lamp lights during playback.
If this button is pressed again during playback, playback is paused and the lamp goes off. After playback has been paused for 2 minutes, the unit automatically switches to stop status (STOP).

**(56) STOP button**
Press this to stop the tape travel.



## Menu Operation Section

**(57) Setup card insertion slot**
The optional setup cards are inserted into this slot.

**(58) MENU SET/OFF switch**
This displays the setting menu on the viewfinder screen.
SET: The page on which the previous setting menu operations were completed appears on the viewfinder screen. (When the menu is used for the first time, the first of the pages which can be displayed appears.)
OFF: The setting menu is not displayed on the viewfinder screen.

**(59) SHIFT/ITEM button**
Each time this button is pressed, the cursor moves on the setting menu page now displayed. Use it when selecting items.
<Note>
This switch functions differently depending on the operation item. Check the function by operating the menu item by item.

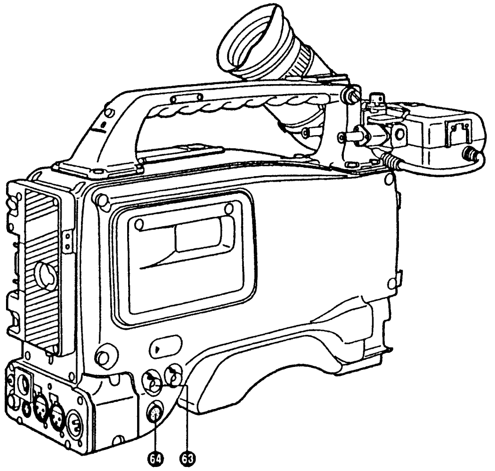
**(60) UP button**
This is used to increment the setting of the item selected on the setting menu by 1 level each time it is pressed or to switch the setting between ON and OFF.

**(61) DOWN button**
This is used to decrement the setting of the item selected on the setting menu by 1 level each time it is pressed or to switch the setting between ON and OFF.

**(62) PAGE button**
This is used to select the setting menu page.

## Time Code-Related Section (1)

**(63) GENLOCK IN connector (BNC)**
The reference signal is supplied to this connector for genlocking with the camera section.



(64) **Multi (TC IN/OUT, AUDIO OUT CH1/CH2) connector**

**TC IN side:**

The time code serving as the reference is input when the time code is locked to an external source.

**TC OUT side:**

Connect this to the time code TC IN connector on the external VTR when locking the external VTR's time code to this unit's time code.

**AUDIO OUT CH1/CH2 side:**

This is the audio output connector. The audio signal is output at −20 dB (0 dB=0.775 V), unbalanced.

## Time Code-Related Section (2)

(65) **HOLD button**

The time data appearing on the counter display at the instant when this button is pressed is held. (The time code generator will still continue to run.) When the button is pressed again, the hold status is released. Use the button to ascertain the time at which a particular scene was shot, for example.

(66) **RESET button**

This resets the time data or user's bit data on the counter display to "00:00:00:00" or "00 00 00 00", respectively.

(67) **DISPLAY switch**

The time code, CTL or user's bit is made to appear on the counter display depending on the setting positions of this switch and the TCG switch (70).

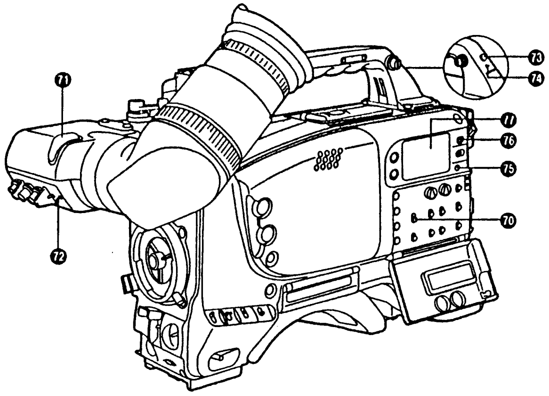
**UB:** The user's bit is displayed.
**TC:** The time code is displayed.
**CTL:** CTL is displayed.

(68) **UP button, DOWN button**

When setting the time code or user's bit, these buttons increment or decrement by 1 the figure of the digit made to flash by the SHIFT/ITEM button (69).

(69) **SHIFT/ITEM (digit advance) button**

When setting the time code or user's bit, this button is used to cause the digit which is to be set to flash.



(70) **TCG (time code selector) switch**

This is used to set the running mode of the internal time code generator.

**F-RUN:** This position is used when the time code is to be advanced continuously regardless of the VTR's operation.
Set to this position when aligning the time code with the actual time or locking the time code to an external source.
**SET:** This position is used for setting the time code or user's bit.
**R-RUN:** This position is used when the time code is to be advanced only while recording is in progress. The time code will be recorded continuously on a tape with a succession of unedited shots.

## Warning/Status Display Section

(71) **Tally lamp**

This is activated when the TALLY switch (72) is at HIGH or LOW, and it lights during recording by the VTR section. It flashes in the same way as the REC lamp inside the viewfinder to warn the operator. The brightness when lighted can be selected using the TALLY switch (HIGH or LOW).

(72) **TALLY switch**

This controls the tally lamp (71).

**HIGH:** The tally lamp is made brighter.
**OFF:** The tally lamp is extinguished.
**LOW:** The tally lamp is made darker.

(73) **Back tally lamp**

This functions in the same way as the tally lamp (71) when the back tally switch (74) is set to ON.

(74) **Back tally switch**

This controls the back tally lamp (73).

**ON:** The back tally lamp operates.
**OFF:** The back tally lamp does not operate.

(75) **WARNING lamp**

This flashes or lights when trouble occurs in the VTR section.

(76) **LIGHT switch**

**ON:** This illuminates the display window (77).
**OFF:** This extinguishes the display window illumination.

(77) **Display window**

The warnings related to the VTR section, remaining battery level, sound level, time data, etc. are displayed in this window.

Power can be supplied to the unit using a battery pack or AC power supply.

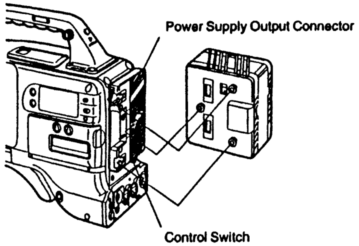
**Using a battery pack**
① Panasonic, ② Anton Bauer or ③ Sony batteries can be used for the battery pack.

Before using a battery pack, be sure to charge it completely using a battery charger.

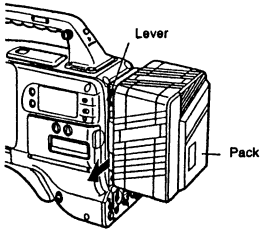
- See the Handling Instructions for the battery pack and battery charger for a detailed explanation of charging methods.

## Using an Anton Bauer Battery Pack

**1** Mount the battery pack.
Insert the battery pack in the direction of the arrow and then slide it into place.



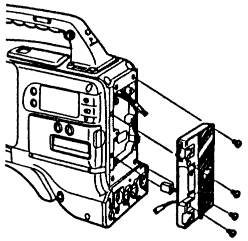
**2** When detaching the battery, hold down the detachment lever of the battery holder and slide the battery pack in the direction of the arrow.



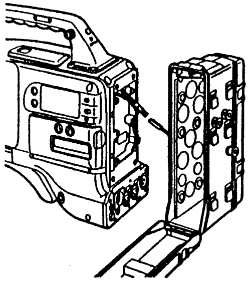
<Note>
The AJ-D700 supports the intelligent battery system and the ultra-light system.
Automatic detection can be performed for intelligent batteries with a remaining battery level of 10% or more. At this time, the remaining battery level is displayed numerically (percentage display) inside the viewfinder. If the power is turned on with a remaining battery level of 10% or less, the voltage is displayed. Also, after intelligent battery detection, the remaining battery level display indicates the level for the intelligent battery even if power is supplied from an external source.

## Using the Panasonic AU-BP402 Battery Pack

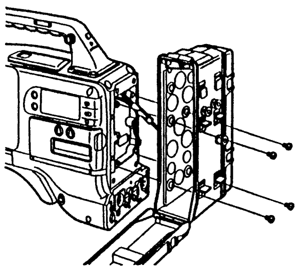
**1** Detach the battery mounts.



**2** Connect the unit's connectors with the connectors of the AU-M402H battery case.



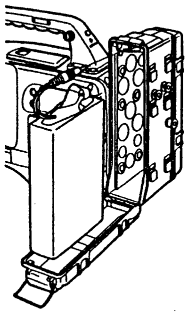
**3** Mount the AU-M402H battery case.
Open the battery case cover and lift up the rubber cap to expose the screw holes. Tighten the screws with a screwdriver and mount the case to the unit. Be sure to tighten the screws completely.



<Notes>

- Do not pull strongly on the rubber cap.
- Take care not to catch the connection cord between the battery case and the main unit.

**4** Connect the battery pack plug to the connector inside the case and insert the battery pack.



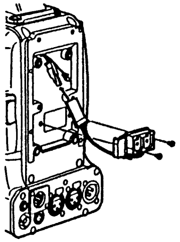
<Note>
The unit's power must be set to OFF before the plug is inserted or removed.

# Power Supply

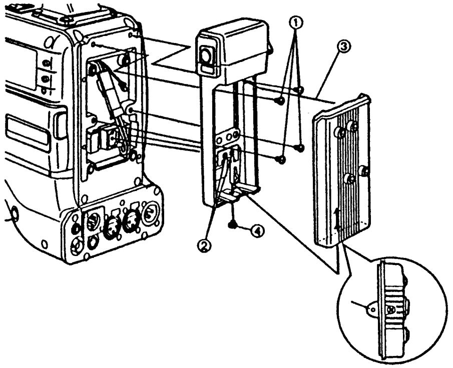
## Using a Sony Battery Pack

**1** Remove the battery mounts.
See page 24.

**2** Mount the accessory battery mounting connector.



**3** Mount the Sony battery holder.
Mount the battery case with the cover detached first, and then mount the detached cover as shown in the figure.
① Tighten the mounting screws.
② Tighten the power supply contact screws.
③ Insert the top of the detached cover in the direction of the arrow.
④ Align the hole at the bottom (metal part) of the cover with the hole at the bottom of the case and mount the cover to the battery mounting connector with the screw of the battery holder.

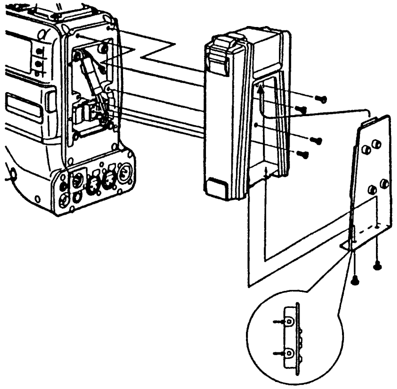


<Note>
Take care when attaching the battery holder that the wires are not pinched.

## Using the Sony BP-90 Battery Pack

1 Mount the accessory battery mounting connector.
(See the preceding page.)

2 Mount the BP-90 battery case.
① Tighten the mounting screws.
② Tighten the power supply contact screws.
③ Insert the top of the detached cover in the direction of the arrow.
④ Align the hole at the bottom (metal part) of the cover with the bottom of the case and mount the cover to the battery mounting connector with the screw.

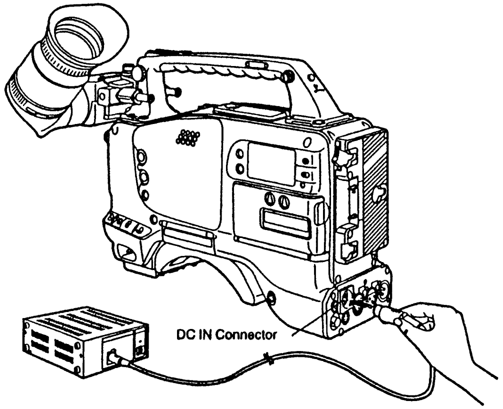


<Notes>
- The unit's power must be set to OFF before the plug is inserted or removed.
- Take care when attaching the battery case that the wires are not pinched.

## Power Supply

### Using an AC Power Supply (When using the AU-B110 AC Adaptor)

1 Connect the unit's EXT DC IN socket with the DC OUT connector of the AU-B110 AC adaptor.

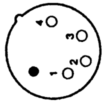


2 Set the AC adaptor's power to ON.

3 Set the unit's power switch to ON.

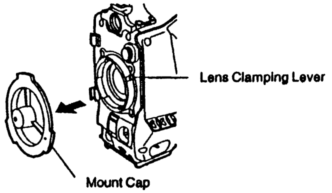
<Notes>
- When using an external power supply other than the AU-B110 AC adaptor, check the pin signal of the EXT DC IN socket.
- When both a battery pack and AC adaptor are connected, power is supplied from the AC adaptor.
- When using an AC adaptor, the AC adaptor's power must be set to ON before the unit's POWER switch is set to ON. If this sequence is reversed, the AC adaptor's output voltage will rise slowly and may cause the unit to malfunction.

| Pin No. | Signal |
|---|---|
| 1 | GND |
| 2, 3 | —— |
| 4 | +12 V |

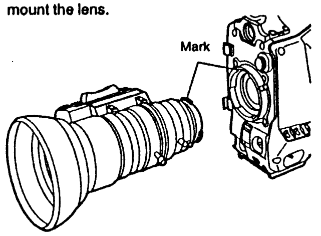


## Mounting the Lens

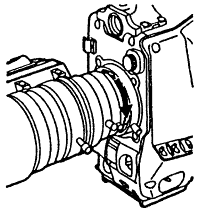
1. Raise the lens clamping lever and remove the mount cap.



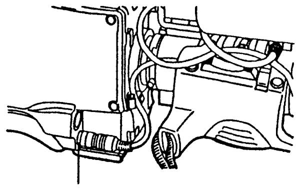
2. Align the indentation at the top centre of the lens mount with the centre mark of the lens and mount the lens.



3. Lower the lens clamping lever and clamp the lens.



4. Press the cable into the cable clamp and connect it to the LENS connector.



- See the Handling Instructions provided with the lens for lens handling.

<Note>
The lens and camera adjustments listed below may be necessary depending on the lens to be mounted.

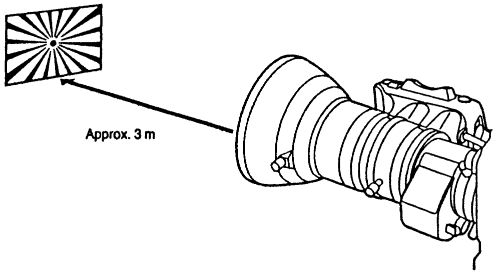
1. Lens flanging adjustment
2. Lens auto iris adjustment
3. Lens white shading adjustment (with this unit)

## Adjusting the Lens Flange

When images are not clearly focused at both the telephoto and wide-angle positions during zoom operations, adjust the flange back (the distance from the lens mounting surface to the image formation surface).
Once adjusted, the flange back does not need to be readjusted as long as the lens is not changed.

### Adjustment method

Check the position of each part of the lens which must be operated in order to adjust the flange back with the lens Handling Instructions.



### Adjusting the Flange Back

1. Set the lens iris to manual.
2. Open the iris. Position the flange back adjustment chart about 3 m from the lens and illuminate it so that an appropriate image output level is obtained.
   If the image level is too high, use the CC/ND filters or the shutter.
3. Loosen the Ff ring clamping screw.
4. Set the zoom ring to the telephoto position manually or by electric drive.
5. Shoot the flange back adjustment chart and turn the distance ring to bring the chart into focus.
6. Set the zoom ring to the wide-angle position.
7. Turn the Ff ring to bring the chart into focus.
   At this time, take care not to move the distance ring.
8. Repeat this operation four to seven times until the lens is in focus at both the telephoto and wide-angle positions.
9. Firmly tighten the Ff ring clamping screw.

- Refer to the Operating Instructions of the lens.

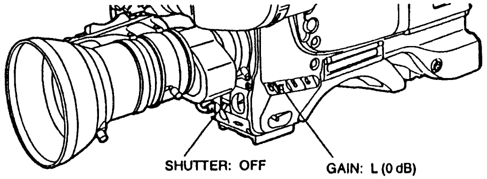
# Adjusting the White Shading

The AJ-D700 is adjusted for the Fujinon S18×6.7 BERM4 (with extender) and S18×6.7 BRM4 (without extender) lenses when shipped from the factory. If a lens other than these two lenses is to be used, adjusting the white shading before shooting is recommended. In particular, be sure to adjust the white shading as indicated below when using a 1/2-inch camera lens without an extender (other than the S18×6.7 BRM4 noted above) or a 2/3-inch camera lens via an adaptor.
The AJ-D700 is able to adjust the white shading for vertical colouring.
(Vertical colouring refers to the condition where the top of the screen is green and the bottom is magenta or where these colours are reversed when a white paper is shot for the entire screen.)

## White shading adjustment procedure

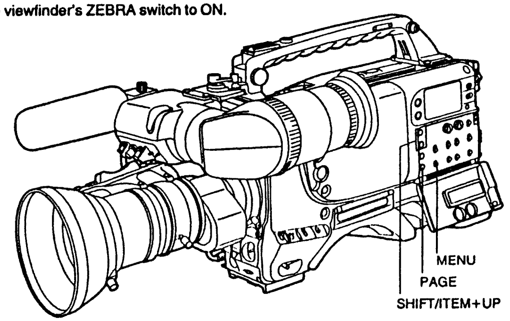
**1** Mount a lens to the camera.
Be sure to also connect the lens cable.

**2** Set the electronic shutter to OFF and the gain to L (0 dB).



**3** If the lens has an extender, remove the extender.

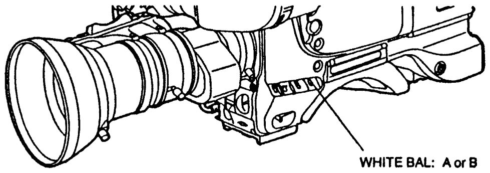
**4** Set the MENU SET/OFF switch from OFF to SET while holding down the SHIFT/ITEM and UP buttons to open the menu.
Press the PAGE button until the VF OPERATION page appears.
Set ZEBRA1 DETECT to 70, ZEBRA2 DETECT to 85 and ZEBRA2 to SPOT. (Initial setting mode)
Return the MENU SET/OFF switch from SET to OFF to close the menu.
Set the viewfinder's ZEBRA switch to ON.



**5** Shoot an evenly white paper.
Flickering occurs easily when fluorescent or mercury lamps, etc. are used for lighting. Therefore, use a light source which does no produce flickering such as sunlight or halogen lamps, etc.

**6** Set the lens iris to manual and adjust the iris so that the ZEBRA pattern covers the entire screen. If the light strikes the subject in an uneven manner, the ZEBRA pattern will not cover a part of the screen. Therefore, adjust the position of the light source, etc. as necessary.
Check that the lens iris is between F4 to F11. If the lens iris is not within this range, adjust the position of the light source, etc.
(Be sure to set the electronic shutter to OFF.)

**7** Set the WHITE BAL selector switch to A or B execute AWB.
Next, execute ABB and then execute AWB again.



**8** Repeat step 6.

**9** Set the MENU switch from OFF to SET while holding down the SHIFT/ITEM and UP buttons to open the menu.
Press the PAGE button until the AUTO SHADING page appears.
Press the SHIFT/ITEM button to move the arrow on the left to the WHITE position and then press the UP or DOWN button.
ACTIVE appears on the viewfinder to indicate that white shading automatic adjustment is operating.
Adjustment is completed when the ACTIVE display disappears.
Return the MENU switch from SET to OFF to close the menu.

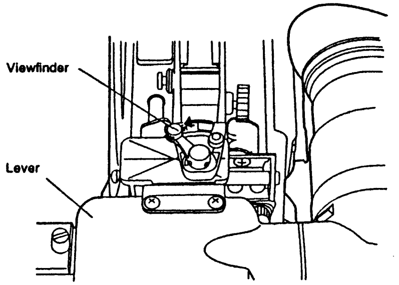
**10** When the lens to be used has an extender, insert an extender and repeat steps 6 to 9.

This completes white shading adjustment.
The adjustment value is stored in the non-volatile memory, so there is no need to readjust the white shading even if the power for the unit is turned off.

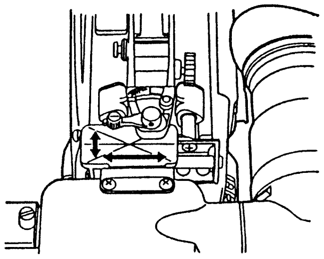
<Notes>

1. The white shading can be adjusted for general lenses using the above method. However, this method may not apply for extremely special lenses.
2. When using a 2/3-inch camera lens, be sure to mount the lens using a conversion adaptor. These lenses cannot be mounted directly as their dimensions differ. Attempting to mount these lenses directly may damage the unit.
3. Vertical colouring may occur near the open position of the lens iris even after performing the above adjustments. However, this is characteristic of the optical system of the lens, and does not indicate a malfunction.

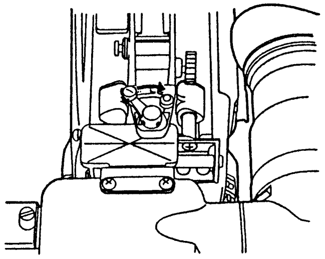
1 Loosen the viewfinder forward-backward/left-right position clamp lever.


Viewfinder
Lever

2 Adjust the position of the viewfinder in the forward-backward and left-right directions.



3 Tighten the viewfinder forward-backward/left-right position clamp lever to the locked position.

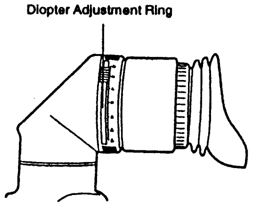


## Adjusting the Diopter and Screen

### Adjusting the diopter

1 Set the POWER switch to ON. A picture will appear in the viewfinder.

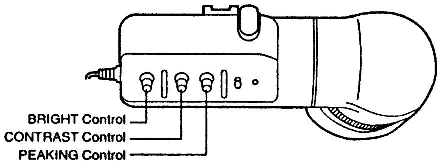
2 Turn the diopter adjustment ring to adjust the diopter so that the viewfinder picture can be clearly seen.


Diopter Adjustment Ring

### Adjusting the screen

Adjust the condition of the viewfinder screen.

**Brightness:** Adjust the BRIGHT control
**Contrast:** Adjust the CONTRAST control
**Contour:** Adjust the PEAKING control


BRIGHT Control
CONTRAST Control
PEAKING Control

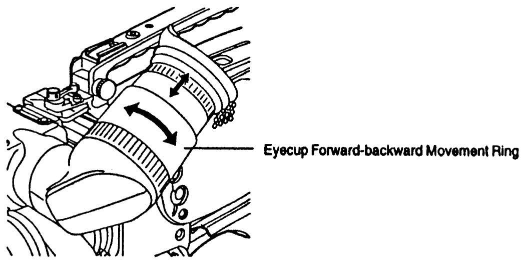
1 Set the POWER switch to ON.

2 Set the OUTPUT switch to CAM.

3 Turn the viewfinder BRIGHT and CONTRAST controls to adjust the picture brightness and contrast. Turning the PEAKING control makes the picture appear softer or sharper. A sharp picture facilitates focusing the lens.

## Adjusting the Eyecup Position

Turn the eyecup forward-backward movement ring to adjust the position of the eyecup in the forward-backward direction.


Eyecup Forward-backward Movement Ring

## Detaching the Eyecup

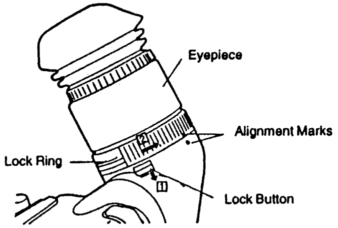
Detaching the eyecup allows the entire screen to be seen clearly even when shooting with your eye removed from the viewfinder. This also facilitates the removal of dust which has adhered to the CRT screen and mirror.

<Note>

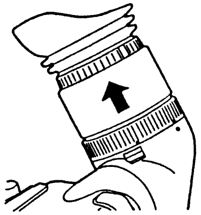
Absolutely do not wipe the mirror surface as it has been specially treated. Dust which has adhered to the mirror should be blown away with a blower, etc.

1 Press the lock button.

2 Turn the lock ring as far as possible in the counter-clockwise direction and line up the alignment marks on the lock ring and viewfinder barrel.

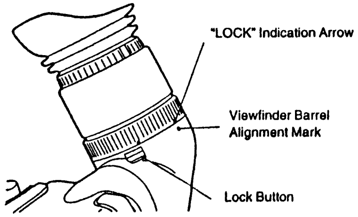


3 Detach the eyecup.



### Remounting the eyecup

1. Line up the alignment marks on the lock ring and the viewfinder barrel.
2. Line up the alignment mark at the tip of the eyepiece (see the illustration for step 2 above) with the alignment marks on the lock ring and the eyecup and insert the eyecup into the barrel.
3. Turn the lock ring as far as possible in the clockwise direction and line up the lock ring's "LOCK" indication arrow with the alignment mark on the barrel of the viewfinder.
4. The lock button latches with a clicking sound.



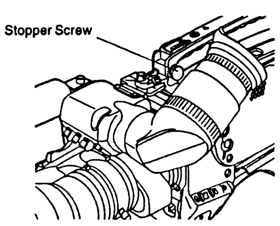
## Adjusting the Viewfinder

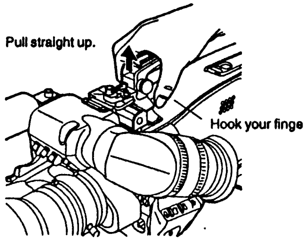
### Detaching the Viewfinder

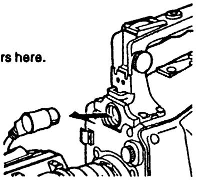
1 Check that the POWER switch is set to OFF.

2 Disconnect the plug from the viewfinder cable connector.
<Note>
Use both hands to detach the viewfinder. The viewfinder may not detach smoothly with one hand, resulting in damage to the viewfinder.

3 Loosen the viewfinder stopper screw and detach the viewfinder by pulling it straight up.





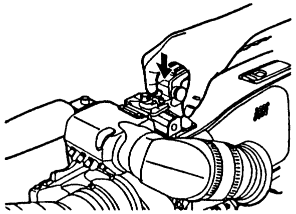


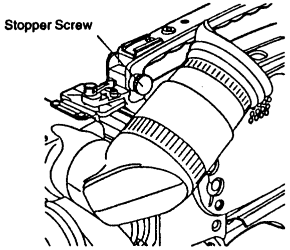
### Mounting the Viewfinder

1 Press down the viewfinder.

2 Tighten the viewfinder stopper screw firmly.

3 Connect the plug to the viewfinder connector and secure the viewfinder cable with the clamp.
<Note>
Insert the plug firmly when connecting it to the viewfinder connector.



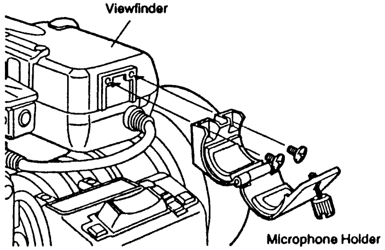


## Using the Microphone Mounted to the Main Unit

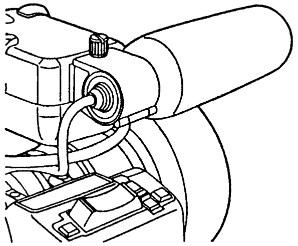
Using the AJ-MC700P microphone kit (option) or the AJ-MH700P microphone holder (option) allows a microphone to be mounted to the main unit.
- See the Handling Instructions for the microphone holder.

**When using the AJ-MC700P microphone kit (option) microphone mounted to the main unit**

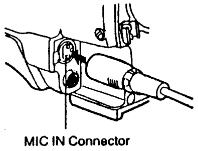
**1** Mount the microphone holder.



**2** Mount the microphone.

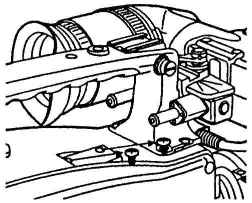


**3** Connect the microphone connecting cable to the unit's MIC IN jack.

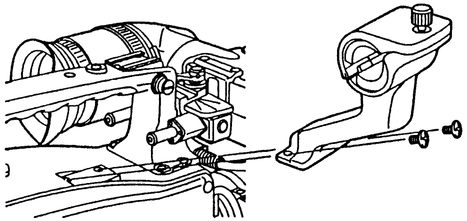


**Mounting the AJ-MH700P microphone holder (option)**

**1** Remove the microphone holder mounting screws.

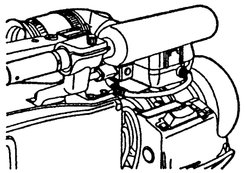


**2** Mount the AJ-MH700P microphone adaptor (option) to the main unit.

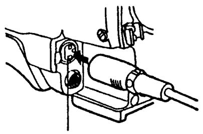


Mount the microphone adaptor using the accessory screws.

**3** Mount the microphone to the microphone holder and tighten the screws.



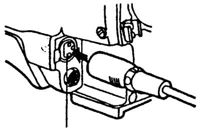
**4** Connect the microphone connecting cable to the MIC IN jack.



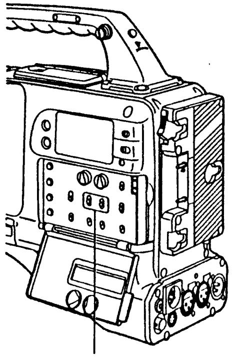
**5** Set the AUDIO IN switch to FRONT [MIC] in accordance with the audio channel to be recorded.

## Using the Microphone

### When using the microphone not mounted to the main unit



To the MIC IN Connector

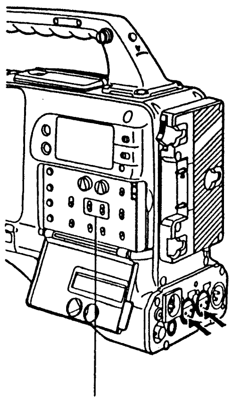


**AUDIO IN switch:** Set the AUDIO IN switch for the audio channel you wish to record to FRONT [MIC].

<Note>
When extending the microphone, use a cable which supports the phantom power supply type of microphone.

## Audio Input Preparations

### When Using the Microphone not Mounted to the Main Unit

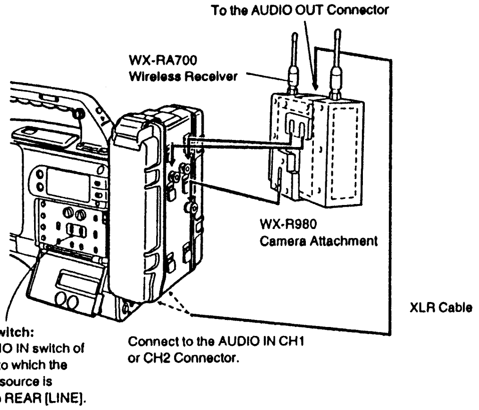


Up to two external microphones can be connected to the AUDIO IN CH1/CH2 Connectors.
Phantom power supply type microphones can also be supported by a menu setting.

**AUDIO IN Switch:** Set the AUDIO IN Switches of the channels to which microphones are connected to REAR [MIC].

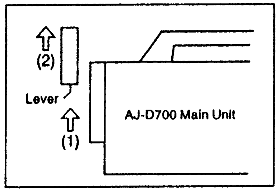
## Mounting a Wireless Microphone

When using the Panasonic wireless microphone system, mount the WX-RA700 wireless receiver.


To the AUDIO OUT Connector
WX-RA700
Wireless Receiver
WX-R980
Camera Attachment
XLR Cable
Connect to the AUDIO IN CH1 or CH2 Connector.

**AUDIO IN switch:**
Set the AUDIO IN switch of the channel to which the audio signal source is connected to REAR [LINE].

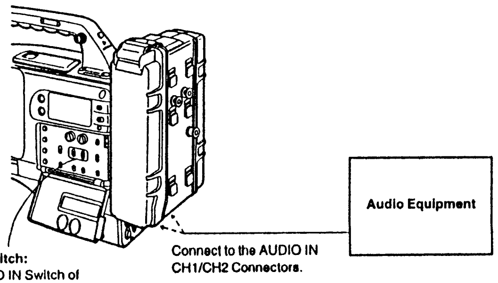
When detaching the wireless microphone, press up the lever on the bottom of the camera attachment (1) and detach the microphone in the upward direction (2).


(2)
Lever
(1)
AJ-D700 Main Unit

- See the Handling Instructions for the WX-RA700 wireless receiver for wireless receiver operations.

## Connecting an Audio Component

When using an audio component as the line input signal source, connect the audio component to the unit's AUDIO IN CH1/CH2 connectors.


Audio Equipment
Connect to the AUDIO IN CH1/CH2 Connectors.

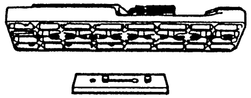
**AUDIO IN Switch:**
Set the AUDIO IN Switch of the channel to which the audio signal source is connected to REAR [LINE].

## Mounting the Unit to a Tripod

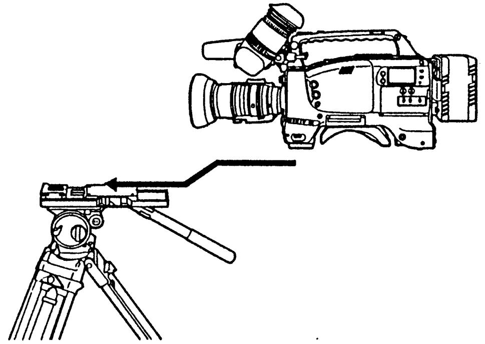
When mounting the unit to a tripod, use an optional tripod attachment.

1 Mount the tripod attachment to the tripod.
Select the attachment hole in consideration of the unit's and tripod attachment's centre of gravity. In addition, check that the diameter of the selected hole matches the diameter of the universal head's camera mounting screw.

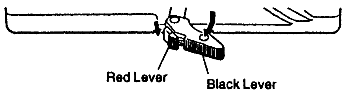
Tripod Attachment



2 Mount the camera to the tripod attachment.
Slide the unit forward along the grooves until a clicking sound is heard.

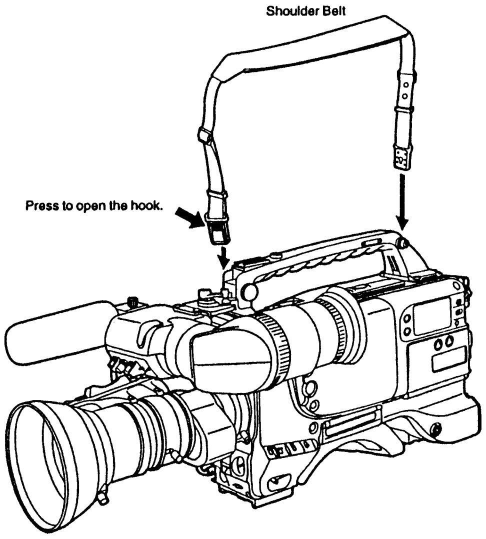


**When detaching the tripod attachment**
Hold down the red lever and move the black lever in the direction of the arrow.

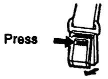

Red Lever
Black Lever

<Note>
When the tripod attachment pin does not return to its original position after the camera has been detached, hold down the red lever and move the black lever in the direction of the arrow again to return the pin to its original position.
Care should be taken as the camera cannot be mounted if the pin remains in the centre.

## Mounting the Shoulder Belt


Shoulder Belt
Press to open the hook.

To remove the shoulder belt, open the hooks and then remove the belt.

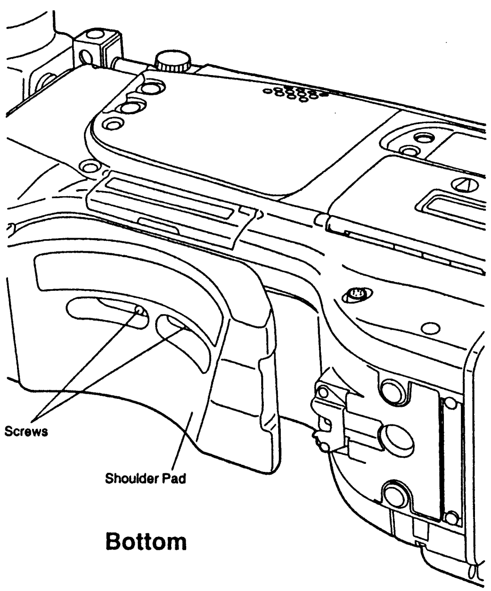


<Note>
When mounting and removing the shoulder belt, press on the top of the hooks to check that the belt is securely mounted.

## Adjusting the Shoulder Pad Position

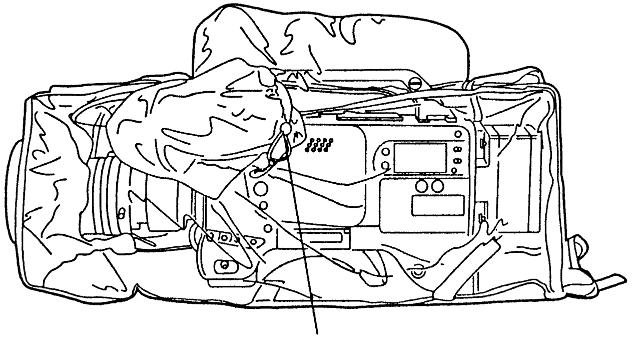
The shoulder pad can be slid up to ⅜" in the forward-backward direction from the centre position (the position when shipped from the factory). Adjust the shoulder pad position to facilitate operation of the unit.

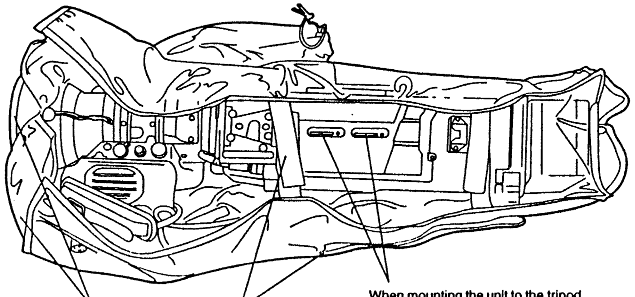
1. Loosen the two screws.
2. Slide the pad in the forward-backward direction to select an appropriate position.
3. Tighten the screws to clamp the pad.


Screws
Shoulder Pad
Bottom

## Attaching the Rain Cover

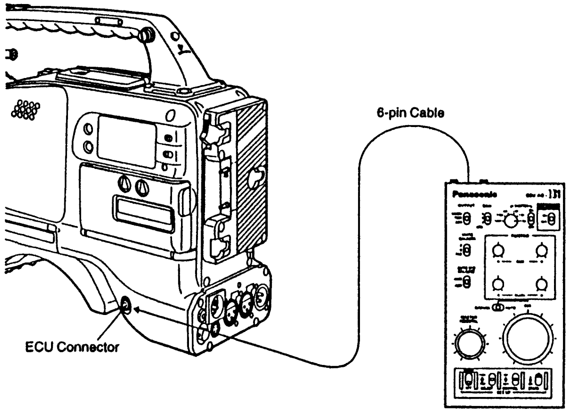
Attach the rain cover as shown in the figure below.




Secure the surface fastener.
When mounting the unit to the tripod attachment, mount the unit using this hole.

## Connecting the AQ-EC1 Extension Control Unit (Option) (For AJ-D700EN)

Connecting the AQ-EC1 extension control unit (option) allows a portion of the camera section functions to be operated by remote control.
When the AQ-EC1 is connected and the POWER switches of the unit and AQ-EC1 are set to ON, the unit automatically enters remote control mode.
The handling instructions included with the AQ-EC1 describe operations for when the AQ-EC1 is connected to an AQ series digital camera.
When the AQ-EC1 is connected to the AJ-D700, some functions differ, and some features cannot be used.



<Notes>

- The POWER switches of the unit and AQ-EC1 must be set to OFF before the 6-pin cable is connected or disconnected.
- All adjustments and settings made using the switches and controls other than the menu setting section of the AQ-EC1 are erased when the unit's POWER switch is set to OFF. Also, adjustments and settings made using the AQ-EC1 cannot be written to setup cards. However, when the AQ-EC1 is connected again, these settings return to the AQ-EC1 settings.
  (Menu contents set with the menu setting section are saved.)

<Note>

The functions of the AQ-EC1 are limited as follows.

- The STORE switch does not function.
  (If the menu settings are changed while the AQ-EC1 is connected to the AJ-D700, the new menu settings are saved automatically as soon as the changes are made.)
  Note that the AQ-EC1 gain switch displays –3, 0 and 9 correspond to L, M and H, and the OUTPUT switch settings CAMERA, TEST and BAR to CAM/AUTO KNEE ON, CAM/AUTO KNEE OFF and BAR for each main unit.
- The Synchro scan and Super V modes cannot be used while the AQ-EC1 is connected to the unit.
- The lens iris (IRIS) control of the AQ-EC1 is valid only when the lens iris AUTO/MANUAL selector is set to AUTO.

## Displaying the Setting Menu Inside the Viewfinder

When the MENU SET/OFF switch is set to SET, the setting menu appears on the viewfinder screen. The setting menu is displayed in page units. The following table lists all pages contained in the setting menu as well as an outline of the functions for each page.
The setting menu configuration can be changed according to the purpose.

## Setting Menu Configuration

| Page No. | Page name | Function outline | Reference |
|---|---|---|---|
| 58 | MARKER | Marker settings | Setting the Marker Displays |
| 56 | VF DISPLAY | Selection of viewfinder screen displays | Setting Display Items |
| 59 | CAMERA ID | Camera ID display settings | Setting the Camera ID Display |
| 72 | SHUTTER SPEED | Shutter speed/mode settings | Setting the Electronic Shutter |
| 73 | SYNCHRO SCAN | Synchro scan shutter speed settings | Setting the Electronic Shutter |
| 52 | I LED | I lamp display settings | Setting the I Lamp Display |
| 81 | SET UP CARD | Setup card | Setup card operations |
| 106 | MAIN FUNCTION | Used function settings | — |
| 107–109 | FUNCTION 1/5 to 5/5 | Used function settings | Selecting Functions |
| 62 | TIME DATE | Time and date settings | Selecting Functions |
| 64 | SETTING LOW/MID/ HIGH | Camera settings | Selecting Functions |
| 114–118 | LEVEL 1/6 to 6/6 | Camera settings | Recording Adjustments |
| 119 | VF OPERATION | Viewfinder operations | Viewfinder |
| 120 | LENS ADJ | Lens adjustments | Lens |
| 120–122 | MENU SELECT 1/3 to 3/3 | User menu ON/OFF settings | User Menu |
| 123 | AUTO SHADING | Automatic shading adjustments | Shading |
| 50 | DATA RESET | Resetting the setting menu | Returning to the default settings |
| 123 | DIAGNOSTIC | — | — |

See the corresponding pages for a detailed description of each page's functions.

### Changing the setting menu configuration

The setting menu can be configured by selecting only the pages necessary for the application. Pages are selected using the MENU SELECT page of the engineer menu mode.
When using the engineer menu, switch the unit to engineer mode as described below.
The unit is switched to user mode by setting the MENU SET/OFF switch to "SET".
The unit is switched to engineer mode by holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU SET/OFF switch to SET.

The user and engineer modes differ as follows.

**User mode:** Only the selected pages the setting menu can be used. The data set on each page is written to the non-volatile memory, allowing it to be stored for extended periods of time.

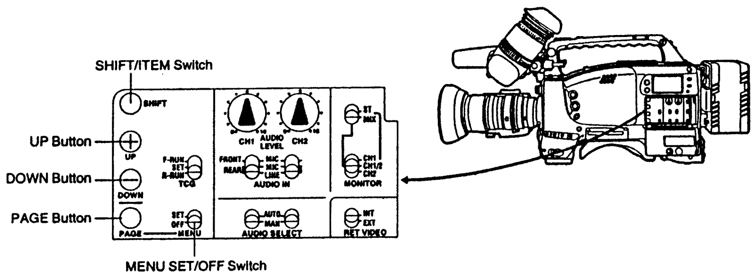
**Engineer mode:** All pages contained in the setting menu can be used. In addition, the data set at each page is written to the non-volatile memory, allowing it to be stored for extended periods of time.

After completing the adjustments and settings with engineer mode, configuring a menu consisting only of frequently used pages allows the necessary pages to be called quickly.

## Displaying the Setting Menu Inside the Viewfinder

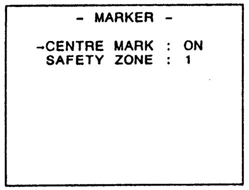
### Basic Setting Menu Operations

The setting menu is operated using the MENU SET/OFF switch and the SHIFT/ITEM, UP, DOWN and PAGE buttons.


SHIFT/ITEM Switch
UP Button
DOWN Button
PAGE Button
MENU SET/OFF Switch
SHIFT
UP
DOWN
PAGE
MENU
F-RUN
SET
R-RUN
TCG
SET
OFF
CH1
AUDIO LEVEL
CH2
FRONT
REAR
MIC
MIC
LINE
AUDIO IN
AUTO
MAN
AUDIO SELECT
ST
MIX
CH1
CH1/2
CH2
MONITOR
INT
EXT
RET VIDEO

**Displaying the setting menu**

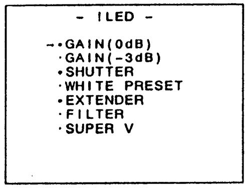
**1** Set the MENU SET/OFF switch to SET.
The status displays at the top and bottom of the viewfinder screen disappear, and the page on which the previous setting menu operations were completed appears.
When the menu is used for the first time, the first of the selected pages appears.



```
         - MARKER -

  →CENTRE MARK  :  ON
   SAFETY ZONE  :  1
```

**Changing the page**

**1** Press the PAGE button.
The menu page changes each time the PAGE button is pressed.



```
         -  ILED  -

      →•GAIN(0dB)
       ·GAIN(-3dB)
       •SHUTTER
       ·WHITE PRESET
       •EXTENDER
       ·FILTER
       ·SUPER V
```

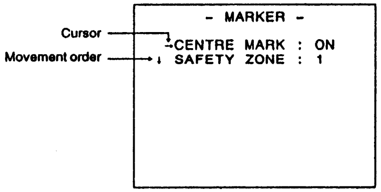
The page can also be changed using the UP and DOWN buttons as follows.

**•PAGE+UP:** The menu page is incremented continuously while the UP and PAGE buttons are held down.

**•PAGE+DOWN:** The menu page is decremented continuously while the DOWN and PAGE buttons are held down.

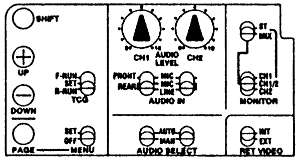
### Selecting the desired item

**1** Press the SHIFT/ITEM switch.
Each time this button is pressed, the cursor (arrow) which indicates the selected item moves to the next item.


Cursor
Movement order

```
         - MARKER -

  →CENTRE MARK  :  ON
 ↓ SAFETY ZONE  :  1
```

The item can also be selected using the UP and DOWN buttons as follows.


SHIFT
UP
DOWN
PAGE
MENU
F-RUN
SET
R-RUN
TCG
SET
OFF
CH1
AUDIO LEVEL
CH2
FRONT
REAR
MIC
MIC
LINE
AUDIO IN
AUTO
MAN
AUDIO SELECT
ST
MIX
CH1
CH1/2
CH2
MONITOR
INT
EXT
RET VIDEO

### Changing the settings

Press the UP button to increase the setting.

- •The setting is incremented by 1 level each time the UP button is pressed.

Press the DOWN button to decrease the setting.

- •The setting is decremented by 1 level each time the DOWN button is pressed.

### Changing the ON/OFF selection

The setting switches to ON or OFF each time the UP (or DOWN) button is pressed.

### Returning to the default settings

The unit can be returned to the default settings (the settings when shipped from the factory or the engineer mode settings) by pressing the UP (or DOWN) button at the DATA RESET page of engineer mode*.
However, care should be taken as the flare and shading adjustment values cannot be returned to the default settings.

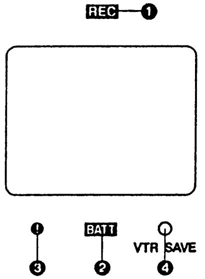
### Quitting the menu

Set the MENU SET/OFF switch to OFF.

- •The setting menu disappears from the viewfinder screen and the displays indicating the unit's current status appear at the top and bottom of the viewfinder screen.

***Engineer mode**
The menu for this mode is opened by holding down the SHIFT/ITEM and UP buttons simultaneously and then setting the MENU SET/OFF switch to the "SET" position.

## The viewfinder displays are as follows.



1. **REC (recording) lamp**
   This lamp lights (red) during recording, and flashes when warnings are issued.
   - See "Warning System" (page 124) for a detailed description.
2. **BATT (battery) lamp**
   When the battery voltage has dropped, this lamp begins flashing several minutes before the unit can no longer be operated, and lights when the unit can no longer be operated.
   To prevent operation from being interrupted, exchange the battery quickly before the battery runs out.
3. **! (Irregular operation status warning) lamp**
   This lamp lights when the unit enters irregular operation status for any of the items set to ON at the ! LED page of the setting menu. Applicable items are as follows.

| Setting item | Setting contents |
|---|---|
| Gain (0 dB) | The gain is set to a value other than 0 dB. |
| Gain (−3 dB) | The gain is set to a value other than −3 dB. |
| SHUTTER switch | The switch is set to ON. |
| WHITE PRESET switch | The switch is set to PRESET. |
| Lens extender | The lens extender is being used. |
| Filter control | The control is set to a value other than 1. |
| SUPER V switch | The switch is set to ON. |

- See "Setting the ! Lamp Display" (next page) for selecting ! lamp display items.

4. **VTR SAVE (VTR power saving) lamp**
   This lamp lights when the VTR SAVE/STBY switch is set to SAVE. It is not lighted during recording.

<Note>
Regardless of the VTR SAVE/STBY switch, the unit automatically enters the SAVE state and the lamp lights either after two minutes when in the stopped state, or after the length of time set for the pause timer (the pause time) when in the paused state.

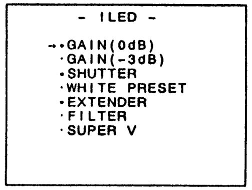
## Setting the ! Lamp Display

Items subject to ! lamp display are selected at the ! LED page of the setting menu. (When shipped from the factory, the unit is set so that the ! LED page is not displayed.) To operate the ! LED page, switch the unit to engineer mode or select the ! LED page at the MENU SELECT page.

- See "Setting Menu Configuration" (page 47) for engineer mode and selection of displayed pages.

**1** Set the MENU SET/OFF switch to SET.
The setting status displays disappear from the viewfinder screen, and the page on which the previous setting menu operations were completed appears. (When the menu is used for the first time, the first page appears.)

**2** Press the PAGE button until the ! LED page shown below appears. (This operation can also be performed using the PAGE+UP/DOWN buttons.)



```
      - !LED -

 →•GAIN(0dB)
  ·GAIN(-3dB)
  •SHUTTER
  ·WHITE PRESET
  •EXTENDER
  ·FILTER
  ·SUPER V
```

<Note>
•: ON
·: OFF

| | |
|---|---|
| **→•GAIN (0 dB):** | This selects whether or not the ! lamp lights when the gain is set to any value other than 0 dB. |
| **·GAIN (−3 dB):** | This selects whether or not the ! lamp lights when the gain is set to any value other than −3 dB. |
| **•SHUTTER:** | This selects whether or not the ! lamp lights when the SHUTTER switch is set to ON. |
| **·WHITE PRESET:** | This selects whether or not the ! lamp lights when the white balance memory channel is PRST. |
| **•EXTENDER:** | This selects whether or not the ! lamp lights when the lens is in EXTENDER mode. |
| **·FILTER:** | This selects whether or not the ! lamp lights when the filter is set to any value other than 3200K. |
| **·SUPER V:** | This selects whether or not the ! lamp lights when SUPER V is set to ON. |

**3** Repeatedly press the SHIFT/ITEM button to move the cursor to the position of the desired item.

**4** Press the UP and DOWN buttons to choose ! lamp lighted/not lighted for the selected item.
**To select ON:** Press the UP button. An asterix (•) appears to the left of the item name.
**To select OFF:** Press the DOWN button. A period (·) appears to the left of the item name.

Repeat steps 3 and 4 to continue making ON/OFF settings for other items.

**5** When menu operations have been completed, set the MENU SET/OFF switch to OFF.
The setting menu disappears from the viewfinder screen and the displays indicating the unit's current status appear at the top and bottom of the viewfinder screen.

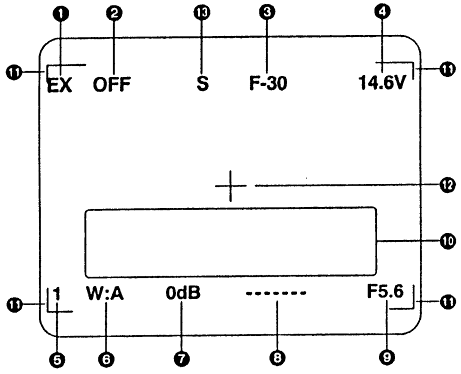
## Status Displays Inside the Viewfinder Screen

In addition to images, messages indicating the unit's settings and operating status appear on the viewfinder screen. The centre marker and safety zone marker, etc. are also displayed.
When the MENU SET/OFF switch is set to OFF, items set to SET at the VF DISPLAY page of the setting menu and using related switches appear at the top and bottom of the screen.
Messages informing of the setting contents or of the adjustment course or results can also be displayed for approximately 3 seconds when settings are changed, during the course of adjustments, or after adjustments have been completed.

- See "Selecting Display Items" (page 56) for selecting display items, "Display Mode and Setting Change Message" (page 57) for the setting change message, and "Setting the Marker Displays" (page 58) for the marker displays.

The display positions of all items which can be displayed are shown in the figure below.

1. Extender display
2. Shutter speed/mode display
3. Remaining tape length display
4. Remaining battery level display
5. Filter display
6. White balance memory display
7. Gain value display
8. Audio level display
9. Iris value display
10. Warning display
11. Safety zone marker
12. Centre marker
13. Super iris ON display



1 **Extender display**
This is displayed when the lens extender is being used.

2 **Shutter speed/mode display**
This displays the shutter speed or shutter mode setting.

| | |
|---|---|
| **OFF:** | The shutter is not used. |
| **1/60, 1/120, 1/250, 1/500, 1/1000, 1/2000:** | Shutter speeds (seconds) during standard mode. |
| **1/29.9–1/252 (SYNCHRO SCAN):** | Synchro scan mode is selected. |
| **SUPER V:** | High vertical resolution mode is selected. |

3 **Remaining tape length display**
This indicates the remaining tape length (minutes) for the VTR during recording.

Remaining tape length display

| Display | Remaining tape length |
|---|---|
| F–30 | Full to 30 minutes |
| 30–25 | 30 to 25 minutes |
| 25–20 | 25 to 20 minutes |
| 20–15 | 20 to 15 minutes |
| 15–10 | 15 to 10 minutes |
| 10–5 | 10 to 5 minutes |
| 5–0 | 5 to 0 minutes |

The "5–0" display flashes when there is less than 3 minutes of tape remaining.

4 **Remaining battery level display**
When an Anton Bauer Digital Magnum Series battery is used to supply power to the unit, the remaining battery level is displayed numerically (%).

5 **Filter display**
This displays the type of filter selected.

6 White balance memory display
This displays the selected white balance automatic adjustment memory.
A: The WHITE BAL switch is set to A.
B: The WHITE BAL switch is set to B.
P: The WHITE BAL switch is set to PRST.

7 **Gain value display**
This displays the image amplifier gain setting (dB) set by the GAIN switch.

<Note>
When using an Anton Bauer Digital Magnum Series battery, the remaining battery level display continues to display the level for the Anton Bauer battery even if power supply is switched to an external power source near the end of the battery's power. However, note that the unit operates according to the external power source.

**8 Audio level display**

This displays the audio CH1 level.
During sine wave input, the audio level display corresponds roughly to the VTR level meter display as follows.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Audio Channel 1 Level Display | — | — | — | □ | — | — | * |
| VTR Level Meter | -40 | -30 | -25 | -20 | -15 | -8 | 0 |

**9 Iris value display**

This displays the approximate iris setting (F number).

**10 Warning display**

This displays the black balance, white balance, auto knee function, super iris, super high gain and other warning displays.

**11 Safety zone marker**

This indicates the 80% or 90% (setting when shipped from the factory) range for the viewfinder screen area. The screen area percentage is selected at the MARKER page of the setting menu.
- See "Setting the Marker Displays" (page 58) for a detailed description.

**12 Centre marker**

This indicates the centre of the viewfinder screen. This marker is displayed when set to ON at the MARKER page of the setting menu.

**13 Super Iris ON display**

This indicates that the super iris is ON.

---

1) **Iris value display**
The iris value is displayed when using a lens with the iris value display function.

# Status Displays Inside the Viewfinder Screen

## Selecting Display Items

The items to be displayed on the viewfinder screen can be selected by switching the display ON/OFF setting independently for each item at the VF DISPLAY page. The items which can be selected are as follows.

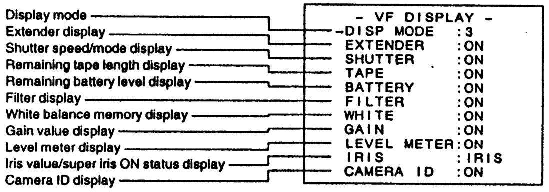
- Display mode (See "Display Mode and Setting Change/Adjustment Course Message".)
- Extender display
- Shutter speed/mode display
- Remaining tape length display
- Remaining battery level display
- Filter display
- White balance memory display
- Gain value display
- Level meter display
- Iris value/super iris ON status display
- Camera ID display

- The camera ID is displayed when recording the colour bar according to the OUTPUT/AUTO KNEE switch setting. See "Setting the Camera ID" (page 59) for a detailed description.

### Select the items to be displayed on the viewfinder screen.

1 Set the MENU SET/OFF switch to SET.
The page on which the previous setting menu operations were completed appears on the viewfinder screen. (When the menu is used for the first time, the first page appears.)

2 Press the PAGE button until the VF DISPLAY page shown below appears.
(This operation can also be performed using the PAGE+UP/DOWN function.)


Display mode
Extender display
Shutter speed/mode display
Remaining tape length display
Remaining battery level display
Filter display
White balance memory display
Gain value display
Level meter display
Iris value/super iris ON status display
Camera ID display

```
   - VF DISPLAY -
→DISP MODE   :3
 EXTENDER    :ON
 SHUTTER     :ON
 TAPE        :ON
 BATTERY     :ON
 FILTER      :ON
 WHITE       :ON
 GAIN        :ON
 LEVEL METER:ON
 IRIS        :IRIS
 CAMERA ID   :ON
```

3 Press the SHIFT/ITEM button to move the cursor to the position of the desired item.

4 Press the UP and DOWN buttons to choose whether to display (ON) or not display (OFF) the selected item on the viewfinder screen.
The setting switches to ON or OFF each time the UP (or DOWN) button is pressed.
Repeat steps 3 and 4 when setting display ON/OFF for other items.

5 When menu operations have been completed, set the MENU SET/OFF switch to OFF.
The setting menu disappears from the viewfinder screen and the displays indicating the settings of the selected items appear.

## Display Mode and Setting Change Message

Messages informing of the contents of changed settings and adjustment results can be limited to part of the displayed items or not displayed for all items.
The conditions under which messages are displayed and the corresponding display modes are shown in the table below.

Setting change/adjustment results messages and display modes

| Conditions under which messages are displayed | Message | Display mode setting | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| When the filter selection is changed. | ND: n (n=1, 2, 3, 4) | × | × | ○ |
| When the gain setting is changed. | GAIN: n dB (n=−3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 30) | × | × | ○ |
| When the WHITE BAL switch setting is changed. | WHITE: n (n=ACH, BCH, PRESET) | × | × | ○ |
| When the OUTPUT/AUTO KNEE switch is set to AUTO KNEE or OFF*) | AUTO KNEE: ON (or OFF) | × | ○ | ○ |
| When the shutter speed/mode setting is changed. | SS: 1/60 (or 1/120, 1/250, 1/500, 1/1000, 1/2000, S. SCAN, SUPER V) | × | ○ | ○ |
| When the white balance is adjusted (AWB) | Ex.) AWB: OK<br>●See "Adjusting the White Balance" (page 66) for a detailed description. | × | ○ | ○ |
| When the black balance is adjusted (ABB) | Ex.) ABB: OK<br>●See "Adjusting the Black Balance" (page 69) for a detailed description. | × | ○ | ○ |

○: Message displayed
×: Message not displayed

*) The message is displayed for approximately 3 seconds immediately after the power for the unit is turned on.

# Status Displays Inside the Viewfinder Screen

## Changing the Display Mode

The display mode setting appears on the VF DISPLAY page of the setting menu.

**1** Perform the operations in steps 1 to 3 of "Selecting Display Items" (page 56) to display the VF DISPLAY page of the setting menu on the viewfinder screen and align the cursor with the DISP MODE item.

**2** Press the UP or DOWN button to select the desired display mode.

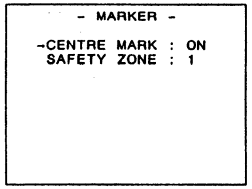
**3** When menu operations have been completed, set the MENU SET/OFF switch to OFF.

## Setting the Marker Displays

Display ON/OFF switching for the centre and safety zone markers and selection of 80% or 90% of the screen area as the safety marker range are performed at the MARKER page of the setting menu.

**1** Set the MENU SET/OFF switch to SET.
The page on which the previous setting menu operations were completed appears on the viewfinder screen. (When the menu is used for the first time, the first page appears.)

**2** Press the PAGE button until the MARKER page shown below appears.
(This operation can also be performed using the PAGE+UP/DOWN function.)



```
      - MARKER -

→CENTRE  MARK  :  ON
 SAFETY  ZONE  :  1
```

**3** Press the SHIFT/ITEM button to move the cursor to the position of the desired item.

**4** The setting switches to ON or OFF each time the UP (or DOWN) button is pressed.

**5** When menu operations have been completed, set the MENU SET/OFF switch to OFF.
The setting menu disappears from the viewfinder screen and the displays indicating the unit's current status appear at the top and bottom of the viewfinder screen.

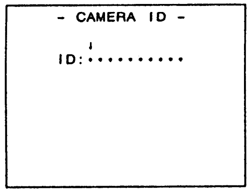
## Setting the Camera ID

The camera ID can be set at the CAMERA ID page of the setting menu.
A camera ID of up to ten characters including English letters, symbols and spaces can be used.
The camera ID is output when the OUTPUT/AUTO KNEE switch is set to BARS and the colour bar signal is being recorded.

<Note>
When the setting menu is displayed, the camera ID is not displayed even if the colour bar signal is output.

## Setting the Camera ID

1. Set the MENU SET/OFF switch to SET.
   The page on which the previous setting menu operations were completed appears on the viewfinder screen. (When the menu is used for the first time, the first page appears.)
2. Press the PAGE button until the CAMERA ID page shown below appears.
   (This operation can also be performed using the PAGE+UP/DOWN function.)



```
 - CAMERA  ID -

       ↓
ID:••••••••••
```

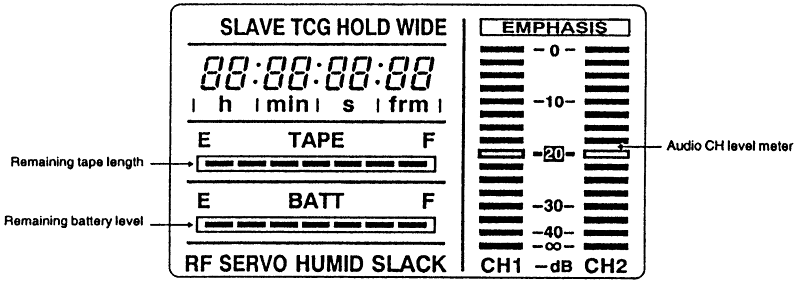
: The cursor is moved to the right (max. 10 spaces) by the SHIFT/ITEM button.
: English letters, symbols and space are switched by the UP and DOWN buttons.

**Camera ID**
("•" indicates a space. This indication is only used at this menu page.)

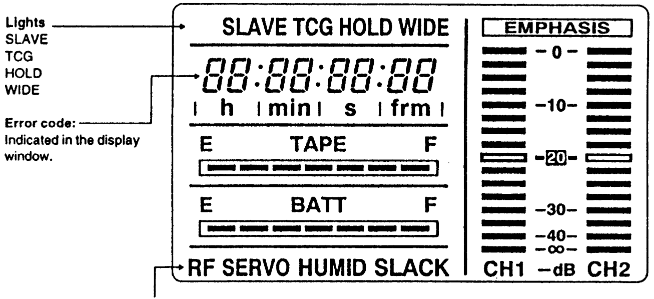
3. Press the UP (or DOWN) button until the desired character appears.
   Each time the UP button is pressed, the character display changes in the order of English letters (A to Z)→numbers (0 to 9)→symbols [space, >, <, ), (, ', ', --, _, ~, /, !]. Pressing the DOWN button changes the character display in the reverse order.
4. Press the SHIFT/ITEM button to advance the cursor to the next position and return to step 3 to set the characters.
5. When menu operations have been completed, set the MENU SET/OFF switch to OFF.
   The setting menu disappears from the viewfinder screen and the displays indicating the unit's current status appear at the top and bottom of the viewfinder screen.

# Displays

## Remaining Battery Level and Audio Level Displays


SLAVE TCG HOLD WIDE
88:88:88:88
h min s frm
E TAPE F
E BATT F
RF SERVO HUMID SLACK
EMPHASIS
-0-
-10-
-20-
-30-
-40-
-∞-
CH1 -dB CH2
Remaining tape length
Remaining battery level
Audio CH level meter

## VTR Section Operation/Status-Related Displays

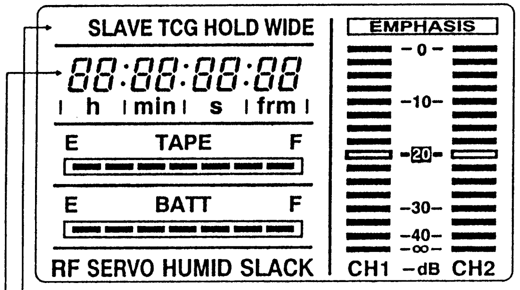

Lights
SLAVE
TCG
HOLD
WIDE
Error code:
Indicated in the display window.
SLAVE TCG HOLD WIDE
88:88:88:88
h min s frm
E TAPE F
E BATT F
RF SERVO HUMID SLACK
EMPHASIS
-0-
-10-
-20-
-30-
-40-
-∞-
CH1 -dB CH2

**Warning display**

| | |
|---|---|
| RF: | Lights when video head clogging occurs. |
| SERVO: | Lights when the servo is out of order. |
| HUMID: | Lights when condensation occurs on the head drum. |
| SLACK: | Lights when tape wind-up trouble occurs. |

- See "Warning System" (page 124) for a detailed description.

## Time Code-Related Displays



These lamps light to indicate the time code, CTL and real time displays.

**SLAVE:** This lamp lights when the time code is locked to an external source.

**HOLD:** This lamp lights when the time code generator is held (when the HOLD button is pressed).

**Time counter display:** This displays the time code, CTL, user bit and real time.

- See below for the relationship between displayed items and switch settings.

**Relationship between the TCG and DISPLAY switch setting positions and the time counter display**

The item displayed in the time counter display is determined by the TCG switch and DISPLAY switch settings.

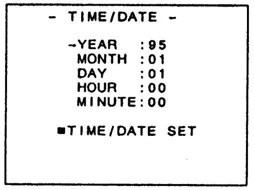
**Time code-related switch settings and display items**

| TCG switch position | DISPLAY switch position | Displayed item |
|---|---|---|
| SET | TC or CTL | Time code |
|  | UB | User bit |
| F-RUN or R-RUN | CTL | CTL |
|  | TC | Time code |
|  | UB | User bit |

# Adjusting the Time and Date

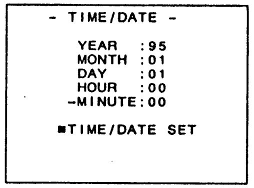
## Adjustment and setup using the setting menu

1. Hold down the SHIFT/ITEM and UP buttons and set the MENU SET/OFF switch to SET. The unit switches to ENG mode.
   The page on which the previous setting menu operations were completed appears on the viewfinder screen.
   (When the menu is used for the first time, the first page appears.)
2. Press the PAGE button until the TIME/DATE page shown below appears.
   (This operation can also be performed using the PAGE+UP/DOWN function.)



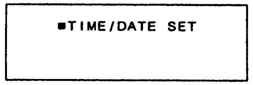
```
- TIME/DATE -

 →YEAR   :95
  MONTH  :01
  DAY    :01
  HOUR   :00
  MINUTE:00

■TIME/DATE SET
```

3. Press the SHIFT/ITEM button to select the item to be changed.
4. Press the UP (or DOWN) button to change the setting value.
   The number is incremented by +1 each time the UP button is pressed and decremented by –1 each time the DOWN button is pressed.



```
- TIME/DATE -

  YEAR   :95
  MONTH  :01
  DAY    :01
  HOUR   :00
 →MINUTE:00

■TIME/DATE SET
```

5. When the settings have been completed, press the SHIFT/ITEM button to select TIME/DATE SET and then press the UP (or DOWN) button. The time starts from when the button is pressed.



```
■TIME/DATE SET
```

6. When menu operations have been completed, set the MENU SET/OFF switch to OFF.
   The setting menu disappears from the viewfinder screen and the displays indicating the unit's current status appear at the top and bottom of the viewfinder screen.

<Note>

The seconds cannot be set and always start from 0 seconds.

## Adjustments and Setup Using the Setting Menu

Adjustments and setup operations during recording are performed at the setting menu.
Setting menu operations are basically performed according to the procedures described on page 49.
However, these procedures vary slightly according to the item.
Items which can be adjusted or set up at the setting menu are as follows.

**Adjustment/setup items at the setting menu**

| Adjustment/setup item | Page name | Operation reference |
|---|---|---|
| Setting the gain selector value | SETTING (LOW/MID/HIGH) | Setting the Gain Selector Value, Setting the DTL and gamma, etc. |
| Selecting the shutter speed/mode to be used | SHUTTER SPEED | Setting the Electronic Shutter |
| Setting the synchro scan mode shutter speed | SYNCHRO SCAN | Setting the Electronic Shutter |
| Selecting required functions | FUNCTION 1/5 to 5/5 | Selecting Functions |
| Shading adjustment | AUTO SHADING | Shading Adjustment |
| Setup card data operations | SET UP CARD | Setup Card Operations |

## Setting the Gain Selector Value

When shooting in locations without sufficient brightness, bright images can be obtained by raising the gain. However, care should be taken as raising the gain also increases the noise.

The gain value for the image amplifier is selected by the GAIN switch. The gain values corresponding to the L, M and H positions of the GAIN switch are set at the MASTER GAIN page of the setting menu.

### Setting the gain selector value

**1** Set the MENU SET/OFF switch to SET.
The page on which the previous setting menu operations were completed appears on the viewfinder screen.
(When the menu is used for the first time, the first page appears.)

**2** Press the PAGE button to display the SETTING (LOW/MID/HIGH) page shown below.
(This operation can also be performed using the PAGE+UP/DOWN function.)

```
     - LOW  SETTING -

  -MASTER GAIN   :  0dB
   H.DTL LEVEL   :08
   V.DTL LEVEL   :10
   DTL CORING    :03
   H.DTL FREQ.   :04
   DARK DTL      :00
   LEVEL DEPEND  :01
   MASTER GAMMA  :0.45
   BLACK STRETCH:OFF
   MATRIX TABLE  :A
```

**3** Press the SHIFT/ITEM button repeately to move the cursor to the MASTER GAIN position.

**4** Press the UP or DOWN button to set the gain value.
The gain value can be set freely regardless of size from among −3, 0, 3, 6, 9, 12, 15, 18, 21, 24 and 30 dB.
When resetting the gain values to the settings when shipped from the factory (LOW=0 dB, MID=9 dB, HIGH=18 dB), select MENU INIT. at the DATA RESET page of the setting menu and press the UP or DOWN button.

**5** When menu operations have been completed, set the MENU SET/OFF switch to OFF.
The setting menu disappears from the viewfinder screen and the displays indicating the unit's current status appear at the top and bottom of the viewfinder screen.

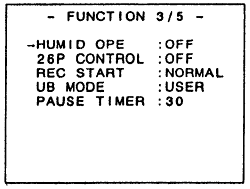
## Selecting Functions

VTR operation functions can be selected at the FUNCTION 3/5 page of the setting menu.

### Selecting the required functions

1 Set the MENU SET/OFF switch to SET.
The page on which the previous setting menu operations were completed appears on the viewfinder screen.
(When the menu is used for the first time, the first page appears.)

2 Press the PAGE button to display the FUNCTION 3/5 page.
(This operation can also be performed using the PAGE+UP/DOWN function.)



```
   - FUNCTION 3/5 -

→HUMID OPE     :OFF
 26P CONTROL   :OFF
 REC START     :NORMAL
 UB MODE       :USER
 PAUSE TIMER   :30
```

3 Press the SHIFT/ITEM button to move the cursor to the position of the function to be changed.

4 Press the UP (or DOWN) button to change the setting of the selected function.

| Item | Variable range | Preset | Remarks |
|---|---|---|---|
| HUMID OPE | ON/OFF | OFF | VTR operation selection when condensation occurs<br>ON: Operations accepted normally.<br>OFF: All operations prohibited except for POWER switch and EJECT. |
| 26P CONTROL | OFF/ BOTH/ON | OFF | 26P remote control selection<br>OFF: Unit only (26P control does not function.)<br>BOTH: Unit and 26P remote control (TALLY LED indicates unit's REC status.)<br>ON: 26P remote control only (Unit control does not function.) (TALLY LED indicates 26P VTR's REC status.) |
| REC START | ALL/ NORMAL | NORMAL | REC acceptance selection for VTR START/STOP<br>ALL: REC accepted regardless of VTR mode.<br>NORMAL: REC accepted only during STOP (POWER SAVE) and REC PAUSE modes. |
| UB MODE | USER/ REAL/ EXT | USER | LTC UB selection |
| PAUSE TIMER | 10/20/30 | 30 | Recording/pause mode hold time selection |

If settings for other functions are also to be changed, return to step 3.

5 When menu operations have been completed, set the MENU SET/OFF switch to OFF.
The setting menu disappears from the viewfinder screen and the displays indicating the unit's current status appear at the top and bottom of the viewfinder screen.

## Adjusting the White Balance

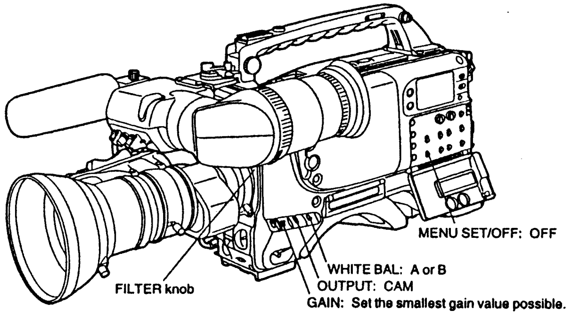
Adjusting the white balance and black balance in the order of AWB (white balance adjustment)→ABB (black balance adjustment)→AWB will provide a better picture.
Normally, the white balance and black balance do not need to be readjusted even if the power is turned off and then on again.
However, the white balance must be readjusted when the lighting conditions change.
If black balance and white balance adjustments are started when the display mode is set to "2" or "3", messages informing of the adjustment course and results will appear on the viewfinder screen. Set the display mode to "1" to not display these messages.

- See "Display Mode and Setting Change Message" (page 57) for a description of setting the display mode.

<Notes>

- The white balance and black balance cannot be adjusted while the setting menu appears on the viewfinder screen. Therefore, be sure to set the MENU SET/OFF switch to OFF.
- ABB must be executed again when the MASTER GAIN values on the LOW SETTING, MID SETTING and HIGH SETTING pages of the setting menu are changed, the S IRIS SW item is set to +30 dB at the FUNCTION 2/5 page of the setting menu, or the GAMMA (ON/OFF) item is switched at the FUNCTION 1/5 page of the setting menu.
- With artificial lights, particularly with fluorescent lights and mercury-arc lamps, the strength of the R, G and B colours changes in synchronization with the power line frequency even if the brightness of these lights appears to be constant. Especially in areas where the power line frequency is 60 Hz, the vertical synchronizing frequency (approx. 50 Hz) of the TV and the frequency (60 Hz) of the lighting tend to interact. This gives rise to flicker and to a phenomenon where the hue changes along with the passage of time, and it is it impossible to obtain the proper white balance.
These phenomena can be reduced by setting the shutter speed to 1/60. For this reason, wherever the unit is used under fluorescent or mercury-arc lamps and at a frequency of 60 Hz, the shutter speed must be set to 1/60 and the white balance obtained. This shutter speed of 1/60 should also be used during shooting.

1 Set the switches as shown in the figure.

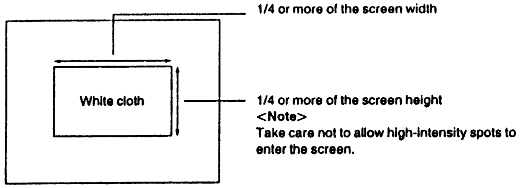


If the settings of the GAIN and WHITE BAL switches are changed, a message informing of the new setting will appear for about 3 seconds at the setting change message display position on the viewfinder screen. (However, the message appears only when the display mode is set to "3".)

2 Select the FILTER knob setting in accordance with the lighting conditions.

- See FILTER knob (page 15) in the Shooting (Recording)/Playback Function Section for examples of FILTER knob settings. If the setting of the FILTER knob is changed, a message informing of the new setting will appear for about 3 seconds at the setting change message display position on the viewfinder screen. (However, the message appears only when the display mode is set to "3".)

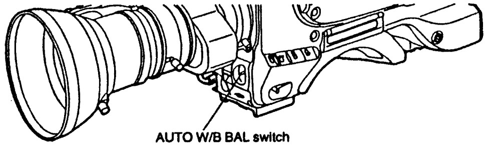
3 Place the white pattern over a location with the same conditions as the light source illuminating the subject and zoom up to project white on the screen.
A white object (white cloth, white wall) near the subject can also be used. The white area required is as shown below.


1/4 or more of the screen width
White cloth
1/4 or more of the screen height

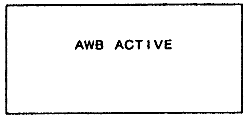
<Note>
Take care not to allow high-intensity spots to enter the screen.

4 Adjust the iris of the lens.

5 Press the AUTO W/B BAL switch to the WHT side and release the switch.
The switch returns to the centre and the white balance is automatically adjusted.



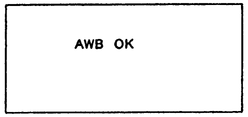
6 During the adjustment, the following message appears on the viewfinder screen.
(However, the message appears only when the display mode is set to "2" or "3".)



AWB ACTIVE

Message during adjustment

7 Adjustment is completed after approximately 1 second (the following message appears) and the adjustment value is automatically stored in the memory (A or B) selected in step 1.



AWB OK

Message after adjustment is completed

<Note>
If a lens equipped with the automatic iris function is used, the iris may experience hunting1). In these cases, adjust the iris gain knob (the knob marked IG, IS, S, etc.) on the lens.
- See the Handling Instructions for the lens for a detailed description.

---

1) **Hunting:** The auto iris responds repeatedly causing the image to become darker and brighter.

## When the White Balance Cannot be Automatically Adjusted

An error message will appear on the viewfinder screen.
(The message appears when the display mode is set to "2" or "3".)
The displayed messages are as follows.

### Error messages related to white balance adjustment

| Error message | Meaning | Treatment |
|---|---|---|
| COLOUR TEMP. HIGH | The colour temperature is too high. | Select an appropriate filter. |
| COLOUR TEMP. LOW | The colour temperature is too low. | Select an appropriate filter. |
| LOW LIGHT | There is insufficient illumination. | Increase the illumination or gain. |
| LEVEL OVER | There is too much illumination. | Decrease the illumination or gain. |

If the above error messages appear, carry out the respective treatment attempt to adjust the white balance again.
If the error message continues to appear even after repeated attempts, consult your dealer.

<Note>
The white balance cannot be adjusted while the setting menu is displayed on the viewfinder screen. Therefore, be sure to set the MENU SET/OFF switch to OFF.

## When there is no Time to Adjust the White Balance

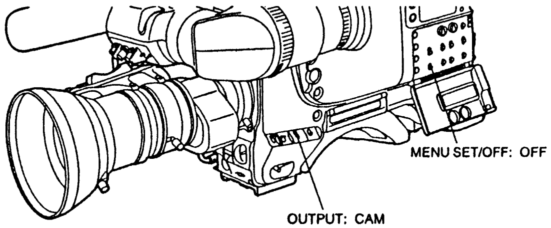
Set the WHITE BAL switch to PRST.
The white balance for the filter is automatically adjusted according to the setting position of the FILTER knob (outside).

**White balance memories**
The white balance has two memory systems: A and B.
Adjustment values for each filter can automatically be stored in the memory corresponding to the setting (A or B) of the WHITE BAL switch. The unit contains 4 filters, making a total of 8 (4×2) adjustment values which can be stored.
If FILTER INH on the FUNCTION 2/5 page of the setting menu is set to ON, the A and B systems can be limited to one memory each.
In this case, the memory contents are not linked to the filters.

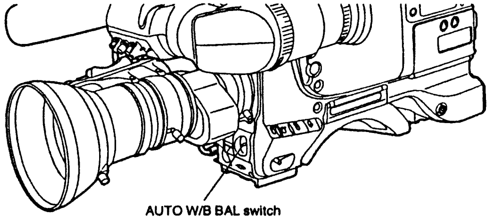
The black balance must be adjusted in the following cases.
- When the unit is used for the first time
- When the unit is first used after an extended period of non-use
- When the unit is used under conditions where the ambient temperature has changed by a wide margin
- When the gain selector value is changed
- When the SUPER IRIS button setting is changed (when setting is changed to +30 dB)
- When the gamma ON/OFF is changed

## Adjusting the Black Balance

**1** Set the switches as shown in the figure.



**2** Press the AUTO W/B BAL switch to the ABB side and then release the switch.
The switch returns to the centre and the black balance is automatically adjusted.



**3** During the adjustment, the following message will appear on the viewfinder screen. (However, the message appears only when the display mode is set to "2" or "3".)

ABB ACTIVE

Message during adjustment

- The lens iris automatically goes to the "CLOSE" position during the adjustment.

**4** Adjustment is completed after a few seconds (the following message appears) and the adjustment value is automatically stored in the memory.

ABB OK

Message after adjustment is completed

<Notes>
- Check that the lens connector is connected and that the iris of the lens is set to CLOSE.
- During black balance adjustment, the iris automatically goes to the shaded status.
- During black balance adjustment, the gain selector circuit switches automatically.
  In addition, flicker and noise may appear on the viewfinder screen, but this does not indicate a malfunction.
- The black balance cannot be adjusted while the setting menu is displayed on the viewfinder screen. Therefore, be sure to set the MENU SET/OFF switch to OFF.
- If black shading is not satisfactory even when ABB is OK, open the AUTO SHADING page of the setting menu and execute black shading adjustment. (See page 123.)

## Shutter Modes

The shutter modes which can be used with the unit's electronic shutter and the shutter speeds which can be selected are as follows.

### Shutter modes and shutter speeds which can be selected

| Mode | Shutter speed | Application |
|---|---|---|
| Standard | 1/60, 1/120, 1/250, 1/500, 1/1000 and 1/2000 (seconds) | This mode is used to shoot clear images of quickly moving subjects. |
| SYNCHRO SCAN | 436 steps in the range from 29.9 Hz to 252 Hz | This mode is used to reduce horizontal stripe patterns for monitor screens with a vertical scanning frequency of 25 Hz or more. |
| SUPER V |  | This mode is used to increase the vertical resolution. |

<Notes>

- Increasing the shutter speed lowers the camera sensitivity regardless of electronic shutter mode.
- If the iris is set to AUTO, the iris opens and the depth of the focuses decreases as the shutter speed rises.

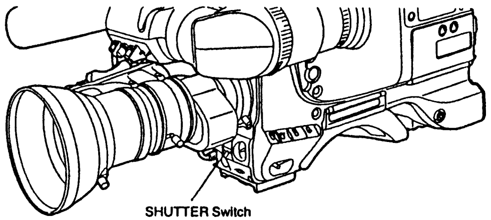
## Setting the Shutter Mode/Speed

- The shutter speed during shutter mode and standard mode is set by the SHUTTER switch.
- During SYNCHRO SCAN mode, the shutter speed can be set beforehand at the SYNCHRO SCAN page of the setting menu. The shutter speed can also be set by the UP and DOWN buttons during SYNCHRO SCAN mode. (In addition, if S. SCAN SEL on the FUNCTION 2/5 page of the setting menu is set to ON, the shutter speed can also be varied by the SUPER IRIS and MODE CHECK switches on the side panel. However, note that the SUPER IRIS and MODE CHECK functions do not operate at this time.)
- The shutter speed selection range can be limited to the required range and whether to use special operation modes (SYNCHRO SCAN or SUPER V) can be selected at the SHUTTER SPEED page of the setting menu.

### Setting the shutter mode/speed

1. Perform the operations outlined in "Changing the Display Mode" (page 58) and set the display mode to "2" or "3" at the VF DISPLAY page of the setting menu.
2. Press the SHUTTER switch from the ON position to the SEL side. The current shutter setting appears in the setting change message display position on the viewfinder screen.

   Ex.: 1/120, 1/51.5, etc.



3. Press the SHUTTER switch to the SEL side repeatedly until the desired mode or speed appears. When all modes and speeds can be displayed, the display changes in the order shown below. If the required shutter speeds and modes have been designated beforehand, only the designated speeds or modes appear.

Standard Mode

1/60 → 1/120 → 1/250 → 1/500 → 1/1000 → 1/2000

SUPER V Mode ← SYNCHRO SCAN Mode ←

- When the unit is shipped from the factory, SUPER V mode is not specified and is therefore not displayed.

## Setting the Synchro Scan Mode

1 Set the MENU SET/OFF switch to SET.
The page on which the previous setting menu operations were completed appears on the viewfinder screen. (When the menu is used for the first time, the first page appears.)

2 Press the PAGE button repeatedly until the SYNCHRO SCAN page shown below appears. (This operation can also be performed using the PAGE+UP/DOWN function.)

```
- SYNCHRO SCAN -

 1/51.5
```

3 Press the UP (the value increases) or DOWN (the value decreases) button repeatedly to display the desired frequency. The frequency can be switched continuously within the range of 29.9 Hz to 252.0 Hz.

4 When menu operations have been completed, set the MENU SET/OFF switch to OFF. The setting menu disappears from the viewfinder screen and the displays indicating the unit's current status appear at the top and bottom of the viewfinder screen.
(If S. SCAN MODE SEL on the FUNCTION 2/5 page of the setting menu is set to ON, the shutter speed can be varied by the SUPER IRIS and MODE CHECK switches. However, care should be taken at this time as the SUPER IRIS and MODE CHECK functions cannot be operated only during SYNCHRO SCAN mode.)

# Setting the Electronic Shutter

## Changing the Shutter Speed/Mode Selection Range

The shutter speed selection range can be limited to the required range and whether to use a special operation mode can be selected at the SHUTTER SPEED page of the setting menu. The unit is set so that the SHUTTER SPEED page is not displayed when shipped from the factory. To operate the SHUTTER SPEED page, switch the unit to engineer mode or select the SHUTTER SPEED page at the MENU SELECT page beforehand.

1 Set the MENU SET/OFF switch to SET.
The page on which the previous setting menu operations were completed appears on the viewfinder screen. (When the menu is used for the first time, the first page appears.)

2 Press the PAGE button repeatedly until the SHUTTER SPEED page shown below appears. (This operation can also be performed using the PAGE+UP/DOWN function.)

```
 - SHUTTER SPEED -

→•SYNCHRO SCAN
 ·SUPER V
 •1/60
 •1/120
 •1/250
 •1/500
 •1/1000
 •1/2000
```

<Note>
The ON/OFF status for each item is indicated by displaying an asterix (•) or period (·) in front of the item on the screen.

3 Press the SHIFT/ITEM button repeatedly to move the cursor to the position of the mode or shutter speed to be set.

4 The selected mode or speed changes from used (ON) to not used (OFF) and vice versa each time the UP (or DOWN) button is pressed.

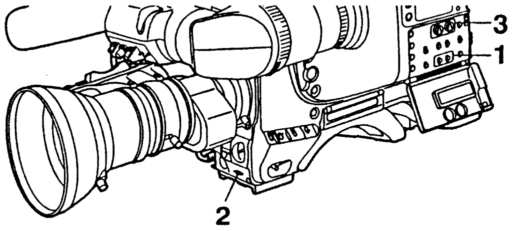
5 When menu operations have been completed, set the MENU SET/OFF switch to OFF. The setting menu disappears from the viewfinder screen and the displays indicating the unit's current status appear at the top and bottom of the viewfinder screen.

<Note>
When operating the unit from the AQ-EC1 extension control unit (option), even if the SHUTTER SPEED page is operated from the unit, the switches of the AQ-EC1 have priority regarding the actual shutter speed.
- See "Setting Menu Configuration" (page 47) for a description of engineering mode and selecting display pages.

## Changing the Iris Automatic Adjustment Reference Value

To change the reference value, change the A. IRIS LEVEL value on the LEVEL 6/6 page of the setting menu using the UP or DOWN button.

If the AUTO SELECT CH1/CH2 selector switch is set to AUTO, the input levels of audio CH1 and CH2 are automatically adjusted. If are the level of audio channels 1 and 2 to be manually adjusted, perform the following operations.



## Manually Adjusting the Audio Level

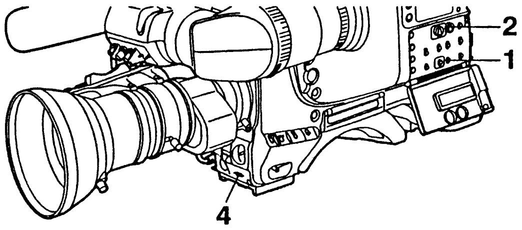
1. Set the AUTO SELECT CH1/CH2 selector switch to MAN.
2. Turn the AUDIO LEVEL CH1 control at the bottom of the front panel completely to the right.
3. Turn the AUDIO LEVEL CH1/CH2 controls to adjust the audio level so that the level meter appears up to 0 dB at the maximum volume.

## Limiter

When the audio level is adjusted manually, the limiter circuit operates with respect to excessive input. Limiter circuit operation can be set to ON and OFF at the setting menu.

## Adjusting the Audio CH1 Level from the Viewfinder

The audio CH1 level can be adjusted by the AUDIO LEVEL CH1 control at the bottom of the front panel while watching the viewfinder.



1. Set the AUTO SELECT CH1 switch to MAN.
2. Turn the AUDIO LEVEL CH1 control on the side panel completely to the right.
3. Set LEVEL METER on the VF DISPLAY page of the setting menu to ON. The audio level display appears on the viewfinder screen.

4. Turn the AUDIO LEVEL CH1 control at the bottom of the front panel to adjust the input volume so that the audio level display appears as shown below.
   - When the input volume is normal, the audio level display turns ON up to the sixth of the seven level display bars from the left.
   - When the rightmost (0 dB) turns asterisk (∗) mark, the input volume is excessive. Adjust the level so that the seventh (0 dB) does not turn ∗ mark.

| — | — | — | □ | — | — | * |
|---|---|---|---|---|---|---|
| -40 | -30 | -25 | -20 | -15 | -8 | 0 |

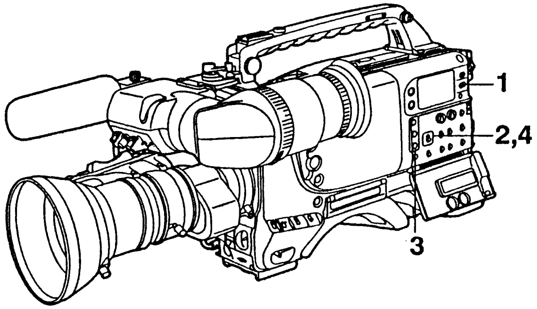
**When the optimal level cannot be set**
The maximum attenuation of the AUDIO LEVEL CH1 control at the bottom of the front panel is about 20 dB. When the optimal level cannot be set within this range, adjust the level using the AUDIO LEVEL CH1 control on the side panel.

**Using the AUDIO LEVEL CH1 controls at the bottom of the front panel and on the side panel**
Normally, the control at the bottom of the front panel is turned completely to the right and the recording level is adjusted using the control on the side panel.

The control at the bottom of the front panel is used to throttle the level when the input level increases suddenly during recording.

## Setting the Time Code

When using both the user bit and the time code, set the user bit first. If the time code is set first, the time code generator will stop while the user bit is being set, causing the set time code to become inaccurate. The time code can be set within the range of 00:00:00:00 to 23:59:59:24.



1 Set the DISPLAY switch to TC.

2 Set the TCG switch to SET.

3 Set the time code using the SHIFT/ITEM, UP and DOWN buttons.

| | |
|---|---|
| **SHIFT/ITEM button:** | This is used to cause the digit which is to be set to flash. Each time it is pressed, the flashing digit moves to the right. |
| **UP button:** | This increments by 1 the figure of the flashing digit. |
| **DOWN button:** | This decrements by 1 the figure of the flashing digit. |

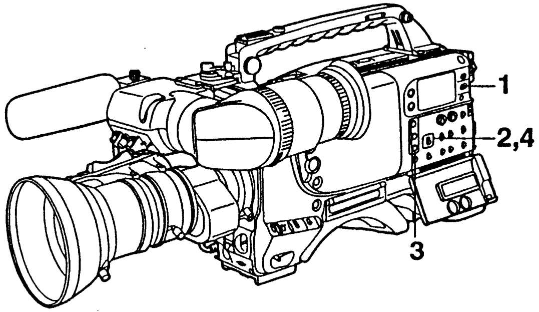
4 Set the TCG switch.
Set the switch to F-RUN when the time code is to be advanced regardless of the VTR's operation.
Set the switch to R-RUN when the time code is to be advanced only while recording is in progress.

**Time code status during battery replacement**
The back-up mechanism functions even while replacing the battery to allow the time code generator to continue operating for extended periods of time (approx. 1 year).

---

## Setting the User Bit

Setting the user bit allows up to 8 digits of hexadecimal data such as memos (date, time), etc. to be recorded in the sub code track.



1 Set the DISPLAY switch to UB.

2 Set the TCG switch to SET.

3 Set UB MODE on the FUNCTION 3/5 page of the setting menu to REAL.

4 Set the user bit using the SHIFT/ITEM, UP and DOWN buttons.

| | |
|---|---|
| **SHIFT/ITEM button:** | This is used to cause the digit which is to be set to flash. Each time it is pressed, the flashing digit moves to the right. |
| **UP/DOWN buttons:** | These increment/decrement by 1 the figure of the flashing digit. |

The hexadecimal characters A to F appear as follows.

| Hexadecimal | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| Display | A | b | C | d | E | F |

5 Set the F-RUN/R-RUN switch to F-RUN or R-RUN.

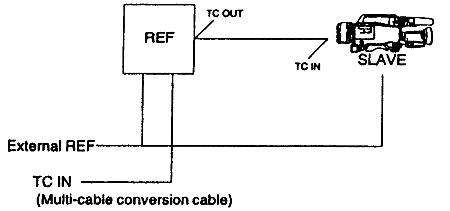
**User bit memory function**
The user bit setting (except for the real time) is automatically stored in the memory and held even after the power is turned off. However, care should be taken as the settings are not stored in the memory if the time from when the power was turned on until the setting operations are completed and the power is turned off is less than 20 seconds.

## Locking the Time Code to an External Source

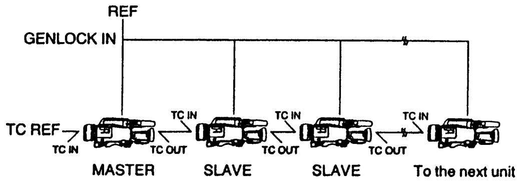
The time code generator of the VTR section can be locked to an external generator.

### Example of connections for external locking

**Example 1: Locking the time code to an external signal**

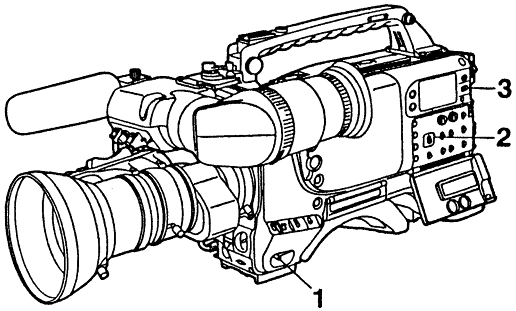


**Example 2: Connecting multiple units and using one unit as the reference**



# Setting the Time Data

## External lock operation procedure



1 Set the POWER switch to ON.

2 Set the F-RUN/R-RUN switch to F-RUN.

3 Set the DISPLAY switch to TC.

4 Supply reference time code and reference video signals with a phase relationship which meets the time code standards to the TC IN and GENLOCK IN connectors, respectively.

This locks the built-in time code generator to the reference time code. After about 10 seconds have passed since the time code generator was locked, the external lock status is maintained even if the external reference time code is disconnected. However, if the reference time code is disconnected during recording (REC), the servo lock will be thrown out of order.

<Note>
When the external locking operation is performed, the time code is locked instantly to the external time code and the same value as the external code value appears in the counter display position. Do not set the VTR to recording mode for several seconds until the sync generator has stabilized.

## Setting Time Data

**User bit setting during external locking**
When the time code is locked to an external source, only the time data is locked to the time data of the time code from the external source. Accordingly, the user bit can be set independently for each unit. The user bit can also be locked to the user bit of the time code from the external source.
•Consult your dealer for a detailed explanation.

**Releasing the external lock**
Stop supplying the external time code and then set the F-RUN/R-RUN switch to R-RUN.

**Switching the power supply from the battery to an external power supply during external locking**
In order to maintain power supply continuity for the time code generator, connect the external power supply to the DC IN connector before unplugging the battery pack. If the battery pack is unplugged first, the external locking continuity of the time code cannot be assured.

**Synchronizing the camera section to an outside source during external locking**
While the time code is locked to an external source, the camera section is genlocked by the reference video signal input to the GENLOCK IN connector.

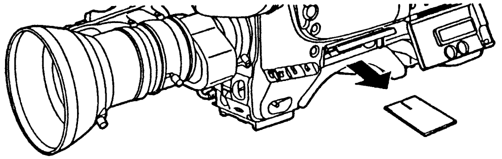
Setting menu contents can be stored using setup cards (option). This data can then be used to quickly recreate the appropriate setup conditions. Subject data, etc. can also be stored on setup cards. See the Setup Card Application Instructions for a detailed description.

- Setup cards are optional, and general purpose memory cards (S RAM 64 kbyte or more) can be used.

## Setup Card Handling

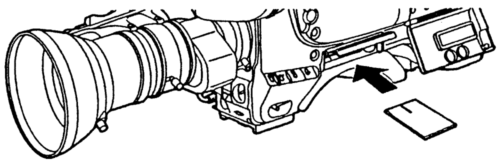
Setup cards can be inserted and ejected regardless of whether the power is on or off.
However, setup cards should not be inserted or ejected during recording as this may result in misoperation.

**Ejecting setup cards**
Lift up on the lower edge of the cover to open the cover and remove the setup card.



<Note>
Take care not to touch the connectors at the front of the setup card.

**Inserting setup cards**
Position the unit so that the panel with the logo faces you, insert the setup card into the setup card insertion slot and then close the cover.



<Note>
Check that the unit is positioned with the logo facing you and that the characters are facing the correct direction, and then insert the card. Be sure to insert the card in the correct direction. If the card is difficult to insert, the card may be backwards or upside-down. In these cases, do not attempt to force in the card, but check whether the card is backwards or upside-down and then reinsert the card.

**Usage and storage precautions**
The following points should be observed when using and storing setup cards.

- Avoid high temperatures and humidity.
- Do not expose setup cards to water.
- Avoid electrostatic charges.

Store setup cards inserted in the unit with the cover closed.

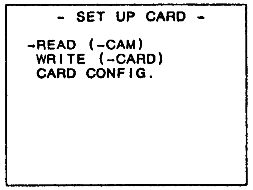
## Setup Card Data Operations

Operations to store setting data on setup cards and read out stored data are performed at the SET UP CARD page of the setting menu.
<Note>
When operating the unit with a remote controller, the SET UP CARD page cannot be operated from the unit.

**Formatting setup cards**

1 Set the MENU SET/OFF switch to SET. The page on which the previous setting menu operations were completed appears on the viewfinder screen. (When the menu is used for the first time, the first page appears.)

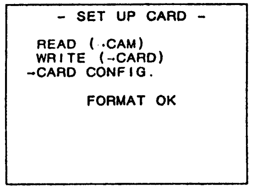
2 Press the MENU switch repeatedly until the SET UP CARD page shown below appears. (This operation can also be performed using the PAGE+UP/DOWN function.)



```
      - SET UP CARD -

  -READ (-CAM)
   WRITE (-CARD)
   CARD CONFIG.
```

3 Press the SHIFT/ITEM button repeatedly to move the cursor to the CARD CONFIG. position.

4 Press the UP (or DOWN) button. When the setup card has been formatted, the message shown below appears.
<Note>
When setup cards are formatted, the setting conditions at that time are also input simultaneously.



```
      - SET UP CARD -

   READ (-CAM)
   WRITE (-CARD)
  -CARD CONFIG.

        FORMAT OK
```

5 When menu operations have been completed, return the MENU SET/OFF switch to OFF. The setting menu disappears from the viewfinder screen and the displays indicating the unit's current status appear at the top and bottom of the viewfinder screen.

**When data is not written**
If the following error messages appear when the UP (or DOWN) button is pressed in step 4, the data is not written.

**Data format error messages**

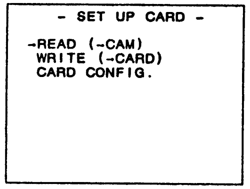
| Error message | Condition | Countermeasure |
|---|---|---|
| **WRITE PROTECT** | The write protect switch on the side of the card is set to ON. | Set the write protect switch on the side of the card to OFF. |
| **NO CARD** | A setup card is not inserted. | Insert a card. |
| **ERROR** | The disk cannot be formatted. | The card may be defective. Replace the card. |

# Setup Card Operations

## Writing set data to cards

1 Set the MENU SET/OFF switch to SET. The page on which the previous setting menu operations were completed appears on the viewfinder screen. (When the menu is used for the first time, the first page appears.)

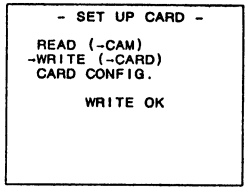
2 Press the MENU switch repeatedly until the SET UP CARD page shown below appears. (This operation can also be performed using the PAGE+UP/DOWN function.)



```
    - SET UP CARD -

→READ (→CAM)
 WRITE (→CARD)
 CARD CONFIG.
```

3 Press the SHIFT/ITEM button repeatedly to move the cursor to the WRITE (→CARD) position.

4 Press the UP (or DOWN) button. When writing is complete, the message shown below appears.

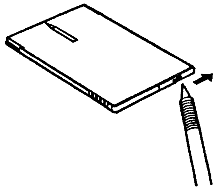


```
    - SET UP CARD -

 READ (→CAM)
→WRITE (→CARD)
 CARD CONFIG.

       WRITE OK
```

5 When menu operations have been completed, return the MENU SET/OFF switch to OFF. The setting menu disappears from the viewfinder screen and the displays indicating the unit's current status appear at the top and bottom of the viewfinder screen.

## Protecting stored data

If the setup card's WRITE PROTECT switch is set to ON, data is not rewritten even if the UP (or DOWN) button is pressed in step 4.



## When data is not written

If the following error messages appear when the UP (or DOWN) button is pressed in step 4, the data is not written.

**Data writing error messages**

| Error message | Condition | Countermeasure |
|---|---|---|
| NO CONFIG | The setup card is not formatted. | Format the card. |
| NO CARD | A setup card is not inserted. | Insert a card. |
| WRITE PROTECT | The write protect switch on the side of the card is set to ON. | Set the write protect switch on the side of the card to OFF. |
| ERROR | Data cannot be written on the card. | The card may be defective. Replace the card. |

## Reading out data stored on cards

1 Set the MENU SET/OFF switch to SET. The page on which the previous setting menu operations were completed appears on the viewfinder screen. (When the menu is used for the first time, the first page appears.)

2 Press the PAGE switch repeatedly until the SET UP CARD page shown below appears. (This operation can also be performed using the PAGE+UP/DOWN function.)

```
     - SET UP CARD -

 →READ (→CAM)
  WRITE (→CARD)
  CARD CONFIG.
```

3 Press the SHIFT/ITEM button to move the cursor to the READ (→CAM) position.

4 Press the UP (or DOWN) button. When readout is complete, the message shown below appears.

```
     - SET UP CARD -

 →READ (→CAM)
  WRITE (→CARD)
  CARD CONFIG.

        READ OK
```

5 When menu operations have been completed, set the MENU SET/OFF switch to OFF. The setting menu disappears from the viewfinder screen and the displays indicating the unit's current status based on the data read out from the setup card appear at the top and bottom of the viewfinder screen.

## When data is not read out

If the following error messages appear when the UP (or DOWN) button is pressed in step 4, the data is not read out.

**Data readout error messages**

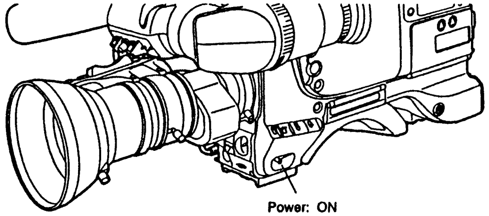
| Error message | Condition | Countermeasure |
|---|---|---|
| NO CONFIG | The setup card is not formatted. | Format the card. |
| NO CARD | A setup card is not inserted. | Insert a card. |
| ERROR | Data cannot be read out. | Data written by devices other than this unit cannot be read out. |

•See "Cassettes" (page 135) for a description of cassettes which can be used with the unit.

## Inserting and Ejecting Cassettes

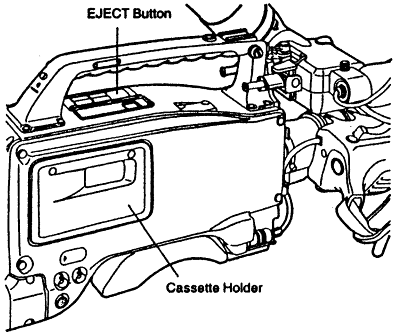
### Inserting cassettes

1 Check that there are no cables, etc. around the cassette holder and the top panel and then set the POWER switch to ON.



If condensation has occurred inside the unit, the HUMID display lights. In these cases, wait until the display goes off before proceeding to step 2.

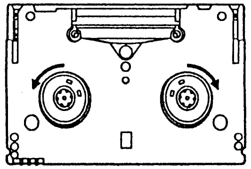
2 Press the EJECT button. The cassette holder opens.



3 Check that there is no slack in the tape, insert the cassette, and then firmly close the cassette holder.

### Checking that there is no slack in the tape

Press the reel in with your finger and turn it lightly in the direction of the arrow. If the reel does not turn, there is no slack in the tape.



### Ejecting cassettes

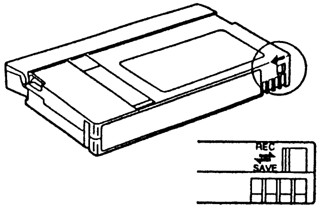
With the power turned on, press the EJECT button to open the cassette holder and eject the cassette. If a cassette is not to be inserted immediately after ejecting the cassette, close the cassette holder.

**Ejecting cassettes when the battery has run out**

Set the POWER switch to OFF to turn off the power, then turn on the power again and immediately hold down the EJECT button. If there is still power remaining in the battery, the cassette will be ejected. However, this operation should not be repeated.

## Preventing Accidental Erasure

Set the tab on the cassette to the SAVE side to prevent the recorded contents of tapes from being accidentally erased.

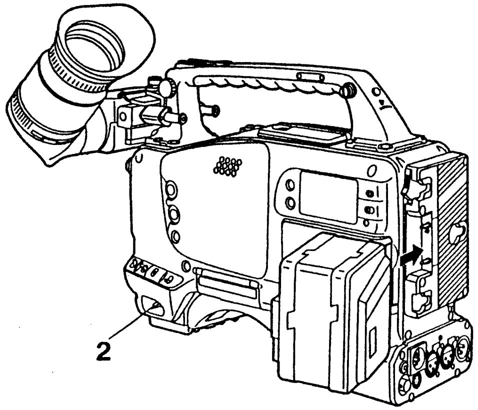


## Basic Procedures

This section describes the basic operating procedures for shooting and recording. When starting to shoot actual images, inspect the unit beforehand to check that all systems are functioning normally.

- See the "Inspections Before Shooting" (page 128) for a description of inspection procedures.

### Procedures from power supply preparations to inserting a cassette



**1** Insert a charged battery pack.

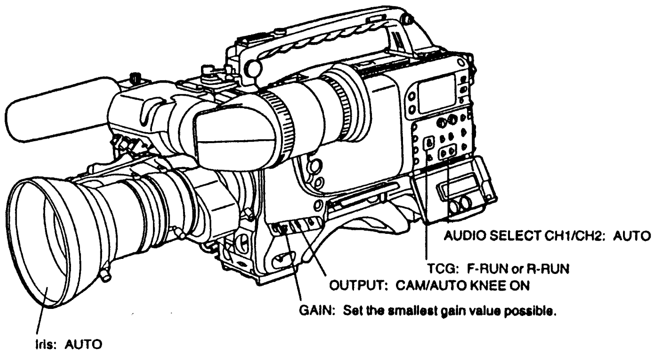
**2** Set the POWER switch to ON and check that the HUMID display does not appear and that five or more bars of the remaining battery level display are lighted.
- If the HUMID display appears, wait until the display goes off.
- If five or more bars of the remaining battery level display are not lighted, replace the battery pack with a sufficiently charged battery pack.

**3** Check that there are no cables, etc. around the cassette holder and top panel and then press the EJECT button to open the cassette holder.

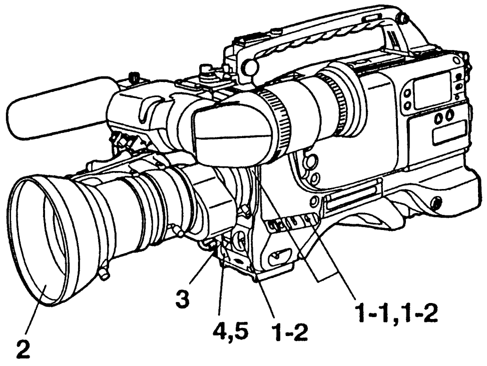
**4** Check the following items, and then insert a cassette and close the cassette holder.
- The cassette is not set to write protect status.
- There is no slack in the tape.

### Procedures from adjusting the white balance and black balance to stopping recording

Turn on the power, insert a cassette, and then set the various switches as follows.


AUDIO SELECT CH1/CH2: AUTO
TCG: F-RUN or R-RUN
OUTPUT: CAM/AUTO KNEE ON
GAIN: Set the smallest gain value possible.
Iris: AUTO

## Shooting Images



**1-1** Select the filter in accordance with the lighting conditions, and when the white balance has already been stored in the memory, set the WHITE BAL switch to "A" or "B".

**When the white balance and black balance have not been stored in the memory and there is no time to adjust the white balance:**

Set the WHITE BAL switch to PRST and set the FILTER knob to "1": this will achieve a 3200 K white balance. (If the knob is set to any other position, a 5600 K white balance is achieved.)

**1-2** To adjust the white balance on site, select the filter which corresponds with the lighting conditions, set the WHITE BAL switch to "A" or "B", and adjust the white balance by following the steps below.

(1) Press the AUDIO W/B BAL switch to the AWB side to adjust the white balance.
(2) Press the AUTO W/B BAL switch to the ABB side to adjust the black balance.
(3) Press the AUTO W/B BAL switch to the AWB side to adjust the white balance.
For details on how to adjust the white balance, read through the section entitled "Adjusting the white balance/black balance" (page 66).

**2** Aim the camera at the subject and adjust the focus and zoom.

**3** When using the electronic shutter, set the shutter speed and operation mode.
- See "Setting the Electronic Shutter" (page 71) for a detailed description.

**4** Press the VTR START button of the unit or the VTR button of the lens to start recording. The REC lamp inside the viewfinder lights during recording.

**5** Press the VTR START button again to stop recording. The REC lamp inside the viewfinder goes off.

**Tape operation buttons**
The tape operation buttons (EJECT, REW, FF, PLAY, STOP) do not function during recording.

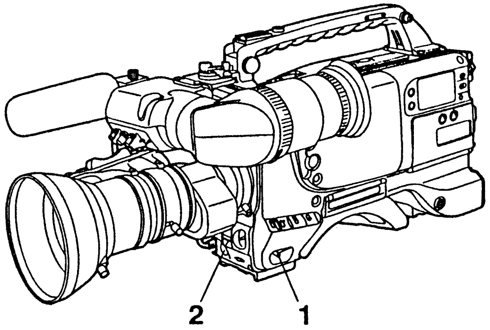
## Successive Shooting

Successive shooting with an accuracy of within ±1 frame can be performed simply by pressing the VTR START button of the unit or the VTR button of the lens while recording is paused.

### While recording is paused

The unit automatically searches for the successive shooting point. However, the time until recording starts differs according to the setting of the VTR SAVE/STBY switch.
- If the VTR SAVE/STBY switch is set to SAVE, recording starts about 2 seconds after the VTR START button is pressed.
- If the VTR SAVE/STBY switch is set to STBY, recording starts immediately after the VTR START button is pressed.

**Successive shooting when the power is turned off while recording is paused**

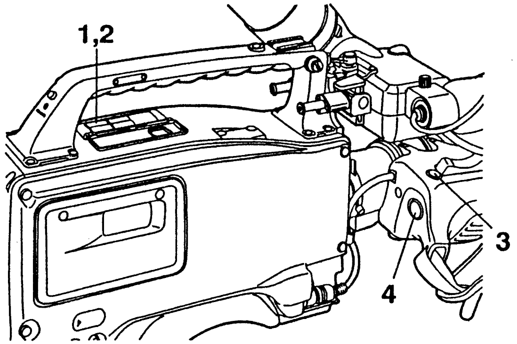


**1** Turn the power back on.

**2** Press the VTR START button of the unit or the VTR button of the lens to start recording.

## Successive Shooting in Other Cases

If successive shooting is to be performed after the tape has been run, the cassette has been ejected, or when using a tape which has only been recorded part-way, follow the procedures outlined below.



Performing successive shooting after the tape has been run, the cassette has been ejected, or when using a tape which has only been recorded part-way

1. Press the PLAY button while watching the viewfinder screen and play back the tape.
2. At the place where continuity between frames is to be provided, press the PLAY (or STOP) button again to stop the tape.
3. Press the RET button on the lens. Preparations for frame-to-frame continuity are made about two seconds later.
4. Press the VTR START button of the unit or the VTR button of the lens to start recording.

## Playback—Checking Recorded Contents

Pressing the PLAY button allows black-and-white playback images to be viewed on the viewfinder. Playback images can also be viewed in two other ways.

- **Rec review:** If the RET VIDEO switch is set to the INT side, black-and-white images of the last 2 seconds of the recorded contents can be seen on the viewfinder.
- **Colour playback:** Connecting a colour monitor to the unit's VIDEO OUT connector allows colour playback images to be viewed on the monitor.

The playback signal is output to the viewfinder even during rewind (REW) and fast forward (FF). Audio output selection and volume adjustment for the playback signal are performed by the MONITOR switches and knobs on page 13.

### Rec Review

If recording is paused and the RET button on the lens is pressed, the tape is automatically rewound and the playback images for the last two seconds appear on the viewfinder. This allows the recording status to be checked.
After playback, the unit returns to the recording start standby status. Holding down the RET button rewinds and plays back up to 10 seconds of the tape.

- See "Selecting Functions" (page 65) for a description of CAM RET. function settings.

<Note>
The rec review function cannot be used unless recording has been performed for more than 1 second.

### Colour Playback

Connecting a colour monitor to the VIDEO OUT connector of the unit allows colour playback images to be viewed on the monitor.

# Connection With an External VTR

The unit is equipped with an interface which enables recording to be performed by an external VTR.

- Mounting the AJ-YA700P 26-pin output adaptor (option) and connecting the 26-pin cable (option) to the unit allows recording to be performed by the VTR section (internal VTR) of the unit and an external VTR. The component video signal is output from the 26-pin interface.

## Precautions When Connecting an External VTR

Set 26P CONTROL on the FUNCTION 3/5 page of the setting menu to BOTH or ON. (The setting is OFF when shipped from the factory.)

**Power supply**

Power is not supplied or received between the unit and the external VTR, so special power supplies should be provided for each unit. The BATT lamp and remaining battery level display function inside the viewfinder indicate the power supply status only for the internal VTR. The power supply status for the external VTR should be checked at the external VTR.

**TALLY lamp and REC lamp operation**

The unit's TALLY lamp and the REC lamp inside the viewfinder indicate the REC status of the unit when 26P CONTROL is set to BOTH. When 26P CONTROL is set to ON, these lamps indicate the REC status of the external VTR.

**Warning tone**

External VTR-related warning tones are not output from the unit's speaker or PHONES jack.

**Note on connecting cables**

The signals may not be connected properly with some cables.

The signal assignments for the 26-pin output adaptor AJ-YA700P (optional) are shown in the following table. Use this table as a reference for connection with an external VTR.

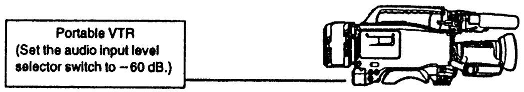
| Pin No. | Signal | Pin No. | Signal |
|---|---|---|---|
| 1 | Composite video signal | 8 | $P_B$ GND |
| 2 | Composite video GND | 9 | CAM MIC (H) |
| 3 | Y GND | 10 | CAM MIC (C) |
| 4 | Y signal | 11 | CAM MIC (GND) |
| 5 | $P_R$ signal | 12 | VTR START/STOP |
| 6 | $P_R$ GND | 15 | REC TALLY |
| 7 | $P_B$ signal | B | GND |

# Recording Simultaneously with the Internal VTR and an External VTR

## Connections

Mount the AJ-YA700P 26-pin output adaptor (option) to the unit, connect the external VTR with the 26-pin cable, and set the audio input level selector switch of the external VTR to "−60 dB". SW3101 and SW3102 on the CAM ENC Printed Circuit Board of the unit must be set to the 26P side. (See next page.)

Audio input level selector switch: −60 dB



To the 26-pin connector of the AJ-YA700P
(See the following page for mounting the 26-pin output adaptor.)

## Checking the Function Settings

Check that the settings of the functions which control the 26-pin interface are set to BOTH or ON at the FUNCTION 3/5 page of the setting menu. See "Selecting Functions" for a description of the various function settings.

## Starting Recording

1. Operate the external VTR and set it to recording paused status.
2. Press the VTR START button of the unit or the VTR button of the lens. The internal and external VTRs start recording simultaneously. Pressing the button again sets both VTRs to the recording paused status.

## If One VTR Comes to the End of its Tape During Recording

Even if one VTR comes to the end of its tape and stops, the other VTR continues recording operation.

**Returning the VTRs to simultaneous recording status**

- If the internal VTR came to the end of its tape, replace the cassette and press the VTR START button of the unit or the VTR button of the lens. The external VTR continues recording operation during this time.
- If the external VTR came to the end of its tape, replace the cassette and operate the external VTR to restart recording. The internal VTR continues recording operation during this time.

<Note>

Care should be taken as the internal VTR will assume recording paused status if the VTR START button of the unit or the VTR button of the lens is pressed after replacing the external VTR's cassette.

## Functions of the Unit's VTR SAVE/STBY Switch

**Tape running mode**
Pressing the unit's STOP, REW or FF buttons sets the internal VTR to stop, rewind or fast forward modes, respectively. However, the external VTR is set to recording paused status in all cases.

**Viewing playback images on the viewfinder**
Pressing the unit's PLAY button allows black-and-white playback images from the internal VTR tape to be viewed on the viewfinder. Playback images from the external VTR cannot be viewed.

# Recording With an External VTR Instead of the Internal VTR

## Using the 26-pin Output Adaptor

### Connections

The method of connecting the external VTR is the same as that described in "Recording Simultaneously with the Internal VTR and an External VTR".
- See "Connections" on page 95.

### Mounting the 26-pin output adaptor

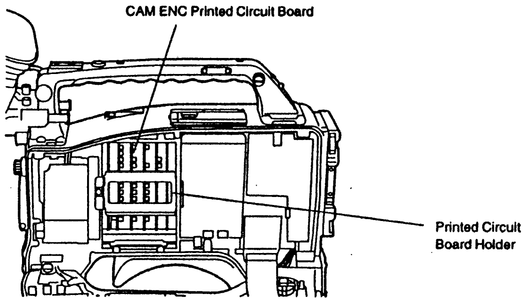
- Consult your local dealer when mounting the adaptor.

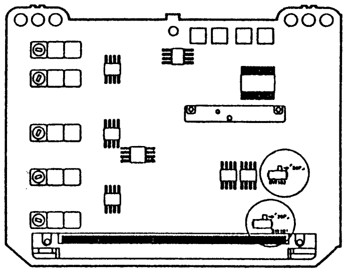
**1** Set the unit's internal switches.

  **1** Remove the side panel on the display window side.

  **2** Remove the Printed Circuit Board holder and remove the CAMERA ENC Printed Circuit Board.

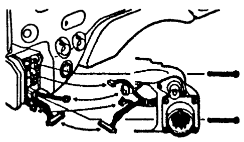
  **3** Set SW101 and SW102 to the 26P side.





CAM ENC Printed Circuit Board

**2** Mount the 26-pin output adaptor.



**Controlling the external VTR with the unit's switches**
Setting the 26P CONTROL function as indicated below at the FUNCTION 3/5 page of the setting menu prevents the internal VTR from being operated and enables only the external VTR to be controlled by the VTR START button of the unit or the VTR button of the lens.
●26P CONTROL: ON
●See "Selecting Functions" (page 65) for a description of FUNCTION 3/5 page operations.

**Switching from the internal VTR to the external VTR**
If the internal VTR experiences problems (tapes becoming tangled, condensation, etc.) during operation and becomes unable to operate, the VTR START button of the unit and the VTR button of the lens will not function. In these cases, setting the 26P CONTROL function as noted above at the FUNCTION 3/5 page allows the external VTR to be operated in place of the internal VTR using the VTR START button of the unit or the VTR button of the lens.

**Starting recording**
Operate the external VTR to set it to recording paused status and press the VTR START button of the unit or the VTR button of the lens. The external VTR starts recording. Pressing the button again sets the VTR to the recording paused status.

**Output level of the 26-pin output adaptor**
When the unit is shipped from the factory, the audio level is set to −60 dBu balanced. The audio level can be set to −20 dBu unbalanced. Consult your dealer for a detailed description.

## RET button

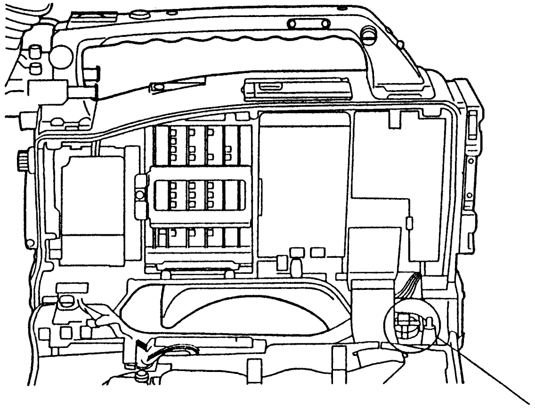
The images recorded on the VTR or return video signal which has been input to the VIDEO IN connector can be seen on the viewfinder screen when the RET (return video) button is pressed or while it is kept pressed in.
What is displayed on the viewfinder screen changes as indicated in the table below according to the RET VIDEO switch setting and VTR mode.
<Note>
When the REC SIGNAL item is set to VIDEO (when recording external input) at the MAIN FUNCTION page of the setting menu, the external input appears on the viewfinder screen. However, the camera image appears on the viewfinder screen while the RET button is held down.

■ **Lens RET button functions**

| RET VIDEO switch setting | Internal VTR mode | Description of what appears on viewfinder screen |
|---|---|---|
| INT | Recording | Images shot by camera.<br>RET button does not function. |
| | Recording paused | What has been recorded (2-second rec review) can be checked. |
| | Playing | Internal VTR's playback images.<br>RET button does not function. |
| | Playback paused | Search operation for successive shooting. |
| EXT | Recording | Return video signal which has been supplied to VIDEO IN connector. |
| | Recording paused | Return video signal which has been supplied to VIDEO IN connector. |
| | Playing | Return video signal which has been supplied to VIDEO IN connector. |
| | Playback paused | Return video signal which has been supplied to VIDEO IN connector. |

# Replacing the Backup Battery

The unit is shipped from the factory with a backup battery already mounted. When the battery runs out, the TCG time code value indicates 00:00:00:00.
At this time, the time code value cannot be backed up.
In addition, the "BACK UP BATT EMPTY" display appears in the viewfinder for 3 seconds when the POWER switch is set to ON to indicate that the battery must be replaced.
Consult your dealer when replacing the battery.



# Setting Menu Screens

## MARKER Screen

This page sets the setting for the marker displays inside the viewfinder.

```
  - MARKER -

-CENTRE MARK : ON
 SAFETY ZONE : 1
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| CENTRE MARK | ON<br>OFF | USER<br>ENG | Centre mark display ON/OFF |
| SAFETY ZONE | OFF<br>1-6 | USER<br>ENG | Safety zone switching/display OFF |

The underlined setting in the Variable range column indicates the preset mode.

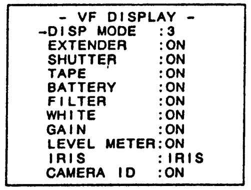
**Menu screen display methods**

**USER menu:** Setting the MENU switch to SET displays the USER menu.

**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## VF DISPLAY Screen

This page sets the setting for the display information inside the viewfinder.



```
   - VF DISPLAY -
 →DISP MODE   :3
  EXTENDER    :ON
  SHUTTER     :ON
  TAPE        :ON
  BATTERY     :ON
  FILTER      :ON
  WHITE       :ON
  GAIN        :ON
  LEVEL METER:ON
  IRIS        :IRIS
  CAMERA ID   :ON
```

**Menu screen display methods**

**USER menu:** Setting the MENU switch to SET displays the USER menu.

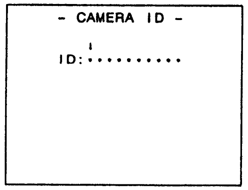
**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

<table>
<tr><th>Item</th><th>Variable range</th><th>VF display</th><th>Remarks</th></tr>
<tr><td>DISP MODE</td><td>1–3</td><td>USER<br>ENG</td><td><table>
<tr><th rowspan="2">Change</th><th colspan="3">Display</th></tr>
<tr><th>1</th><th>2</th><th>3</th></tr>
<tr><td>FILTER</td><td>×</td><td>×</td><td>O</td></tr>
<tr><td>GAIN</td><td>×</td><td>×</td><td>O</td></tr>
<tr><td>AWB</td><td>×</td><td>×</td><td>O</td></tr>
<tr><td>AUTO KNEE SW</td><td>×</td><td>O</td><td>O</td></tr>
<tr><td>SHUTTER</td><td>×</td><td>O</td><td>O</td></tr>
<tr><td>ABB STATUS</td><td>×</td><td>O</td><td>O</td></tr>
<tr><td>AWB STATUS</td><td>×</td><td>O</td><td>O</td></tr>
</table></td></tr>
<tr><td>EXTENDER</td><td>ON<br>OFF</td><td>USER<br>ENG</td><td>Extender display ON/OFF</td></tr>
<tr><td>SHUTTER</td><td>ON<br>OFF</td><td>USER<br>ENG</td><td>Shutter speed display ON/OFF</td></tr>
<tr><td>TAPE</td><td>ON<br>OFF</td><td>USER<br>ENG</td><td>Remaining tape length display ON/OFF</td></tr>
<tr><td>BATTERY</td><td>ON<br>OFF</td><td>USER<br>ENG</td><td>Battery voltage diaplay ON/OFF</td></tr>
<tr><td>FILTER</td><td>ON<br>OFF</td><td>USER<br>ENG</td><td>Filter No. display ON/OFF</td></tr>
<tr><td>WHITE</td><td>ON<br>OFF</td><td>USER<br>ENG</td><td>AWB PRE/A/B display ON/OFF</td></tr>
<tr><td>GAIN</td><td>ON<br>OFF</td><td>USER<br>ENG</td><td>Currently selected gain display ON/OFF</td></tr>
<tr><td>LEVEL METER</td><td>ON<br>OFF</td><td>USER<br>ENG</td><td>Audio level meter display ON/OFF</td></tr>
<tr><td>IRIS</td><td>IRIS<br>S+IRIS<br>S<br>OFF</td><td>USER<br>ENG</td><td>IRIS: Only the f-number is displayed.<br>S+IRIS: Both the super iris ON status and f-number are displayed.<br>S: Only the super iris ON status is displayed.<br>OFF: Neither the super iris ON status nor f-number is displayed.</td></tr>
<tr><td>CAMERA ID</td><td>ON<br>OFF</td><td>USER<br>ENG</td><td>Mix ON/OFF during colour bar recording</td></tr>
</table>

The underlined setting in the Variable range column indicates the preset mode.

## CAMERA ID Screen

This page performs the camera ID settings. Each time the UP button is pressed, the character display changes in the order of space, English letters (A to Z), numbers (0 to 9) and symbols [space, >, <, ), (, ', ', ,, --, -, ~, /, I]. Pressing the DOWN button changes the character display in the reverse order.

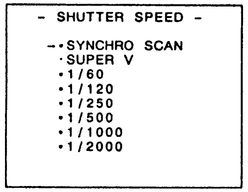


```
  - CAMERA ID -

      ı
  ID:••••••••••
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| ID: •••••••••• | —— | USER<br>ENG | Camera ID input |

## SHUTTER SPEED Screen

This page performs the shutter speed settings. The ON/OFF status for each item is indicated by displaying an asterix (•) or period (·) in front of the item on the screen.



```
  - SHUTTER SPEED -

 →•SYNCHRO SCAN
  ·SUPER V
  •1/60
  •1/120
  •1/250
  •1/500
  •1/1000
  •1/2000
```

•: ON
·: OFF

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| SYNCHRO SCAN | ON<br>OFF | ENG | Synchro scan shutter speed setting |
| SUPER V | ON<br>OFF | ENG | SUPER V mode setting |
| 1/60 | ON<br>OFF | ENG | Shutter speed 1/60 setting ON/OFF |
| 1/120 | ON<br>OFF | ENG | Shutter speed 1/120 setting ON/OFF |
| 1/250 | ON<br>OFF | ENG | Shutter speed 1/250 setting ON/OFF |
| 1/500 | ON<br>OFF | ENG | Shutter speed 1/500 setting ON/OFF |
| 1/1000 | ON<br>OFF | ENG | Shutter speed 1/1000 setting ON/OFF |
| 1/2000 | ON<br>OFF | ENG | Shutter speed 1/2000 setting ON/OFF |

The underlined setting in the Variable range column indicates the preset mode.

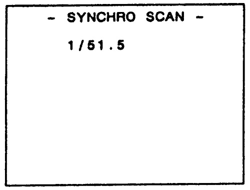
**Menu screen display methods**

**USER menu:** Setting the MENU switch to SET displays the USER menu.

**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## SYNCHRO SCAN Screen

This page performs the synchro scan settings.

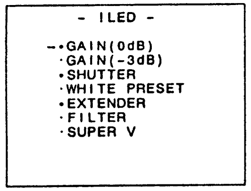


```
- SYNCHRO SCAN -
  1/51.5
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| SYNCHRO SCAN | 1/29.9<br>1/51.5<br>1/252 | USER<br>ENG | Synchro shutter speed selection |

## ! LED Screen

This page sets the ON/OFF setting for the ! LED display inside the viewfinder. The ON/OFF status for each item is indicated by displaying an asterix (•) or period (·) in front of the item on the screen.



```
   - !LED -
-•GAIN(0dB)
 ·GAIN(-3dB)
 •SHUTTER
 ·WHITE PRESET
 •EXTENDER
 ·FILTER
 ·SUPER V
```

•: ON
·: OFF

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| GAIN (0 dB) | ON<br>OFF | ENG | This selects whether or not the LED is lighted when the gain is any value other than 0 dB. |
| GAIN (−3 dB) | ON<br>OFF | ENG | This selects whether or not the LED is lighted when the gain is any value other than −3 dB. |
| SHUTTER | ON<br>OFF | ENG | This selects whether or not the LED is lighted when the shutter is ON. |
| WHITE PRESET | ON<br>OFF | ENG | This selects whether or not the LED is lighted when the AWB CH is PRESET. |
| EXTENDER | ON<br>OFF | ENG | This selects whether or not the LED is lighted when the lens is in EXTENDER mode. |
| FILTER | ON<br>OFF | ENG | This selects whether or not the LED is lighted when the filter is any value other than 3200K. |
| SUPER V | ON<br>OFF | ENG | This selects whether or not the LED is lighted when SUPER V is ON. |

<Note>
The ! LED lights when both GAIN (0 dB) and GAIN (−3 dB) are ON unless the gain is set to −3 dB or 0 dB.

The underlined setting in the Variable range column indicates the preset mode.

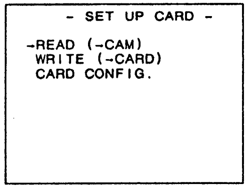
**Menu screen display methods**

**USER menu:** Setting the MENU switch to SET displays the USER menu.

**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## SET UP CARD Screen

This page sets the loading, saving and formatting operations for setup cards. Align the "–" with the desired item and press the UP or DOWN button to perform the corresponding processing.

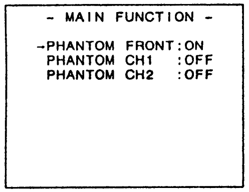


```
   - SET UP CARD -
-READ (→CAM)
 WRITE (→CARD)
 CARD CONFIG.
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| READ (→CAM) | — | USER<br>ENG | Setup card data is written to the unit. |
| WRITE (→CARD) | — | USER<br>ENG | Camera data is written to the setup card. |
| CARD CONFIG. | — | USER<br>ENG | The setup card is formatted. |

## MAIN FUNCTION Screen

This page performs the adjustment function settings.



```
  - MAIN FUNCTION -
-PHANTOM FRONT:ON
 PHANTOM CH1  :OFF
 PHANTOM CH2  :OFF
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| PHANTOM FRONT | ON<br>OFF | ENG | Phantom microphone (front) usage selection<br>ON: Phantom microphone (+48 V) used.<br>OFF: Normal microphone used. |
| PHANTOM CH1 | ON<br>OFF | ENG | Phantom microphone (CH1) usage selection<br>ON: Phantom microphone (+48 V) used.<br>OFF: Normal microphone used. |
| PHANTOM CH2 | ON<br>OFF | ENG | Phantom microphone (CH2) usage selection<br>ON: Phantom microphone (+48 V) used.<br>OFF: Normal microphone used. |

The underlined setting in the Variable range column indicates the preset mode.

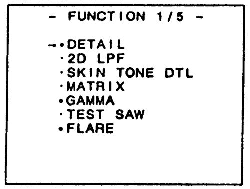
**Menu screen display methods**

**USER menu:** Setting the MENU switch to SET displays the USER menu.

**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## FUNCTION 1/5 Screen

This page performs the adjustment function 1 settings. The ON/OFF status for each item is indicated by displaying an asterix (•) or period (·) in front of the item on the screen.



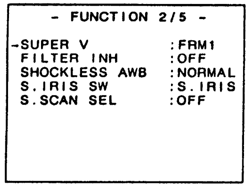
```
   - FUNCTION 1/5 -

   →•DETAIL
    ·2D LPF
    ·SKIN TONE DTL
    ·MATRIX
    •GAMMA
    ·TEST SAW
    •FLARE
```

•: ON
·: OFF

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| DETAIL | ON<br>OFF | ENG | Detail (H, V) ON/OFF switching |
| 2D LPF | ON<br>OFF | ENG | ON/OFF switching for 2-dimensional LPF (Low Pass Filter) which reduces colour smear |
| SKIN TONE DTL | ON<br>OFF | ENG | Skin tone detail ON/OFF switching |
| MATRIX | ON<br>OFF | ENG | Colour adjustment ON/OFF switching |
| GAMMA | ON<br>OFF | ENG | Gamma circuit ON/OFF switching |
| TEST SAW | ON<br>OFF | ENG | Test signal ON/OFF switching |
| FLARE | ON<br>OFF | ENG | Flare compensation ON/OFF switching |

## FUNCTION 2/5 Screen

This page performs the adjustment function 2 settings.



```
     - FUNCTION 2/5 -

-SUPER V             :FRM1
 FILTER INH          :OFF
 SHOCKLESS AWB       :NORMAL
 S.IRIS SW           :S.IRIS
 S.SCAN SEL          :OFF
```

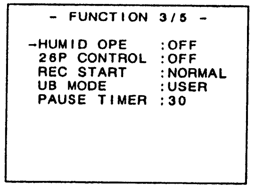
| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| SUPER V | OFF<br>FRM1<br>FRM2 | ENG | Super V ON/OFF switching<br>FRM1: Normal mode<br>FRM2: Lag reduction mode |
| FILTER INH | ON<br>OFF | ENG | Switch that determines whether AWB memory (Ach, Bch) data is stored for each filter.<br>ON: Ach and Bch memory only (2 memory units), regardless of the filter.<br>OFF: Data is stored for each filter. (4×2=8 memory units) |
| SHOCKLESS AWB | OFF<br>NORMAL<br>SLOW<br>FAST | ENG | Shockless AWB ON (NORMAL/SLOW/FAST)/OFF switching |
| S.IRIS SW | S.IRIS<br>30 dB | ENG | Super iris (S.IRIS)/30 dB switching |
| S.SCAN SEL | ON<br>OFF | ENG | Synchro scan ON/OFF switching<br>ON: S.SCAN speed can be varied by the SUPER IRIS/MODE CHECK switch.<br>OFF: Normal mode |

The underlined setting in the Variable range column indicates the preset mode.

**Menu screen display methods**
**USER menu:** Setting the MENU switch to SET displays the USER menu.
**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## FUNCTION 3/5 Screen

This page performs the adjustment function 3 settings.



```
     - FUNCTION 3/5 -

  →HUMID OPE    :OFF
   26P CONTROL  :OFF
   REC START    :NORMAL
   UB MODE      :USER
   PAUSE TIMER  :30
```

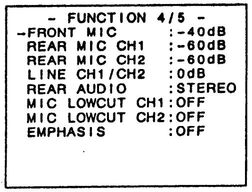
| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| HUMID OPE | ON<br>OFF | ENG | VTR operation selection when condensation occurs.<br>ON: Operation continues normally.<br>OFF: All operations prohibited except for POWER switch and EJECT button. |
| 26P CONTROL | OFF<br>BOTH<br>ON | ENG | 26P remote control selection<br>OFF: Unit only (26P control does not function.)<br>BOTH: Unit and 26P remote control (TALLY LED indicates unit REC status.)<br>ON: 26P remote control only (TALLY LED indicates 26P VTR REC status.) |
| REC START | ALL<br>NORMAL | ENG | REC acceptance selection for VTR START/STOP<br>ALL: REC accepted regardless of VTR mode.<br>NORMAL: REC accepted only during STOP (POWER SAVE) mode and REC PAUSE mode. |
| UB MODE | USER<br>REAL<br>EXT | ENG | LTC UB usage method selection<br>USER: User setting (fixed value)<br>REAL: Real-time operation according to the TIME DATE time<br>EXT: When there is external TC input, the UBG value is slave locked. (When there is no external input, the user setting is used.) |
| PAUSE TIMER | 10<br>20<br>30 | ENG | Selection for the recording/pause hold time.<br>10: 10 minutes<br>20: 20 minutes<br>30: 30 minutes |

The underlined setting in the Variable range column indicates the preset mode.

**Menu screen display methods**
**USER menu:** Setting the MENU switch to SET displays the USER menu.
**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## FUNCTION 4/5 Screen

This page performs the adjustment function 4 settings.

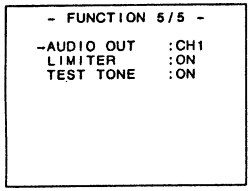


```
  - FUNCTION 4/5 -
-FRONT MIC       :-40dB
 REAR MIC CH1    :-60dB
 REAR MIC CH2    :-60dB
 LINE CH1/CH2    :0dB
 REAR AUDIO      :STEREO
 MIC LOWCUT CH1:OFF
 MIC LOWCUT CH2:OFF
 EMPHASIS        :OFF
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| FRONT MIC | -40/<br>-50/<br>-60 dB | ENG | Camera microphone input level selection |
| REAR MIC CH1 | -40/<br>-50/<br>-60 dB | ENG | Rear jack AUDIO CH1 input microphone level selection |
| REAR MIC CH2 | -40/<br>-50/<br>-60 dB | ENG | Rear jack AUDIO CH2 input microphone level selection |
| LINE CH1/CH2 | +4/0/<br>-6 dB | ENG | Rear jack AUDIO CH1/CH2 input line input level selection |
| REAR AUDIO | STEREO<br>MONO | ENG | Rear jack AUDIO CH1/CH2 input method selection<br>STEREO: Stereo input selected<br>MONO: Monaural input selected |
| MIC LOWCUT CH1 | ON<br>OFF | ENG | CH1 microphone bypass filter ON/OFF switching |
| MIC LOWCUT CH2 | ON<br>OFF | ENG | CH2 microphone bypass filter ON/OFF switching |
| EMPHASIS | ON<br>OFF | ENG | Emphasis ON/OFF switching |

## FUNCTION 5/5 Screen

This page performs the adjustment function 5 settings.



```
  - FUNCTION 5/5 -

 -AUDIO OUT     :CH1
  LIMITER       :ON
  TEST TONE     :ON
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| AUDIO OUT | CH1/<br>CH2/<br>MIX | ENG | AUDIO OUT selection<br>CH1: CH1 output to AUDIO OUT<br>CH2: CH2 output to AUDIO OUT<br>MIX: CH1 and CH2 mixed and output to AUDIO OUT |
| LIMITER | ON<br>OFF | ENG | Audio limiter ON/OFF switching<br>ON: Limiter ON<br>OFF: Limiter OFF |
| TEST TONE | ON<br>OFF | ENG | Audio test tone ON/OFF switching during colour bar output |

The underlined setting in the Variable range column indicates the preset mode.

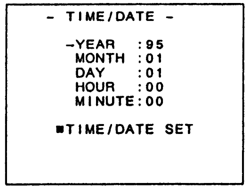
**Menu screen display methods**

**USER menu:** Setting the MENU switch to SET displays the USER menu.

**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## TIME DATE Screen

This page performs the date and time settings. After the date and time have been changed, pressing the UP or DOWN buttons executes the settings.



```
  - TIME/DATE -

 -YEAR   :95
  MONTH  :01
  DAY    :01
  HOUR   :00
  MINUTE:00

 ■TIME/DATE SET
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| YEAR | 95 to 10 | ENG | Year setting |
| MONTH | 1 to 12 | ENG | Month setting |
| DAY | 1 to 31 | ENG | Day setting |
| HOUR | 0 to 23 | ENG | Hour setting |
| MINUTE | 0 to 59 | ENG | Minute setting |
| TIME/DATE SET | — | ENG | Date/time confirmation |

The underlined setting in the Variable range column indicates the preset mode.

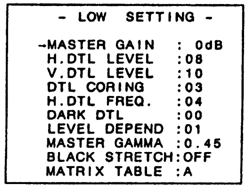
**Menu screen display methods**

**USER menu:** Setting the MENU switch to SET displays the USER menu.

**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## LOW SETTING Screen

This page sets the low level.



```
 - LOW  SETTING -

-MASTER GAIN   : 0dB
 H.DTL LEVEL   :08
 V.DTL LEVEL   :10
 DTL CORING    :03
 H.DTL FREQ.   :04
 DARK DTL      :00
 LEVEL DEPEND  :01
 MASTER GAMMA  :0.45
 BLACK STRETCH:OFF
 MATRIX TABLE  :A
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| MASTER GAIN | −3 dB<br>:<br>0 dB<br>:<br>30 dB | ENG | Gains of −3, 0, 3, 6, 9, 12, 15, 18, 21, 24 and 30 dB (S. H. GAIN) can be set. |
| H.DTL LEVEL | 0<br>:<br>8<br>:<br>31 | ENG | H.DTL (detail) level setting |
| V.DTL LEVEL | 0<br>:<br>10<br>:<br>31 | ENG | V.DTL (detail) level setting |
| DTL CORING | 0<br>:<br>3<br>:<br>15 | ENG | DTL coring setting |
| H.DTL FREQ. | 1<br>:<br>4<br>:<br>5 | ENG | H.DTL frequency selection |
| DARK DTL | 0<br>:<br>5 | ENG | Dark detail setting |
| LEVEL DEPEND. | 0<br>:<br>1<br>:<br>5 | ENG | LEVEL DEPEND. setting |
| MASTER GAMMA | 0.35<br>:<br>0.45<br>:<br>0.75 | ENG | Master gamma setting 0.01 steps |
| BLACK STRETCH | ON<br>OFF | ENG | ON/OFF switching for mode which compensates low-illumination black-out |
| MATRIX TABLE | A<br>B | ENG | Colour compensation table selection |

The underlined setting in the Variable range column indicates the preset mode.

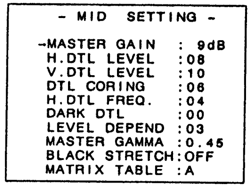
**Menu screen display methods**

**USER menu:** Setting the MENU switch to SET displays the USER menu.

**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## MID SETTING Screen

This page sets the middle level.



```
 - MID  SETTING -

-MASTER GAIN   : 9dB
 H.DTL LEVEL   :08
 V.DTL LEVEL   :10
 DTL CORING    :06
 H.DTL FREQ.   :04
 DARK DTL      :00
 LEVEL DEPEND  :03
 MASTER GAMMA  :0.45
 BLACK STRETCH:OFF
 MATRIX TABLE  :A
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| MASTER GAIN | −3 dB<br>:<br>9 dB<br>:<br>30 dB | ENG | Gains of −3, 0, 3, 6, 9, 12, 15, 18, 21, 24 and 30 dB (S. H. GAIN) can be set. |
| H.DTL LEVEL | 0<br>:<br>8<br>:<br>31 | ENG | H.DTL (detail) level setting |
| V.DTL LEVEL | 0<br>:<br>10<br>:<br>31 | ENG | V.DTL (detail) level setting |
| DTL CORING | 0<br>:<br>6<br>:<br>15 | ENG | DTL coring setting |
| H.DTL FREQ. | 1<br>:<br>4<br>:<br>5 | ENG | H.DTL frequency selection |
| DARK DTL | 0<br>:<br>5 | ENG | Dark detail setting |
| LEVEL DEPEND. | 0<br>:<br>3<br>:<br>5 | ENG | LEVEL DEPEND. setting |
| MASTER GAMMA | 0.35<br>:<br>0.45<br>:<br>0.75 | ENG | Master gamma setting 0.01 steps |
| BLACK STRETCH | ON<br>OFF | ENG | ON/OFF switching for mode which compensates low-illumination black-out |
| MATRIX TABLE | A<br>B | ENG | Colour compensation table selection |

The underlined setting in the Variable range column indicates the preset mode.

**Menu screen display methods**

**USER menu:** Setting the MENU switch to SET displays the USER menu.

**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## HIGH SETTING Screen

This page sets the high level.

```
     - HIGH SETTING -

  -MASTER GAIN   :18dB
   H.DTL LEVEL   :08
   V.DTL LEVEL   :05
   DTL CORING    :10
   H.DTL FREQ.   :04
   DARK DTL      :00
   LEVEL DEPEND  :05
   MASTER GAMMA  :0.55
   BLACK STRETCH:OFF
   MATRIX TABLE  :B
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| MASTER GAIN | −3 dB<br>⋮<br>18 dB<br>⋮<br>30 dB | ENG | Gains of −3, 0, 3, 6, 9, 12, 15, 18, 21, 24 and 30 dB (S. H. GAIN) can be set. |
| H.DTL LEVEL | 0<br>⋮<br>8<br>⋮<br>31 | ENG | H.DTL (detail) level setting |
| V.DTL LEVEL | 0<br>⋮<br>5<br>⋮<br>31 | ENG | V.DTL (detail) level setting |
| DTL CORING | 0<br>⋮<br>10<br>⋮<br>15 | ENG | DTL coring setting |
| H.DTL FREQ. | 1<br>⋮<br>4<br>⋮<br>5 | ENG | H.DTL frequency selection |
| DARK DTL | 0<br>⋮<br>5 | ENG | Dark detail setting |
| LEVEL DEPEND. | 0<br>⋮<br>5 | ENG | LEVEL DEPEND. setting |
| MASTER GAMMA | 0.35<br>⋮<br>0.55<br>⋮<br>0.75 | ENG | Master gamma setting 0.01 steps |
| BLACK STRETCH | ON<br>OFF | ENG | ON/OFF switching for mode which compensates low-illumination black-out |
| MATRIX TABLE | A<br>B | ENG | Colour compensation table selection |

The underlined setting in the Variable range column indicates the preset mode.

**Menu screen display methods**

**USER menu:** Setting the MENU switch to SET displays the USER menu.

**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## LEVEL 1/6 Screen

This page performs the camera setup level 1 settings.

```
       - LEVEL 1/6 -

  -C DTL COMPE.    :OFF
   CHROMA DTL      :00
   C DTL CORING    :00
   KNEE APERTURE   :ON
   SLIM DTL        :OFF
   SUPER COLOUR    :ON
   CORNER DTL      :OFF
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| C DTL COMPE. | ON<br>OFF | ENG | Chroma DTL ON/OFF switching |
| CHROMA DTL | 0<br>⋮<br>15 | ENG | Chroma DTL setting |
| C DTL CORING | 0<br>⋮<br>15 | ENG | Chroma DTL CORING setting |
| KNEE APERTURE | ON<br>OFF | ENG | Knee aperture ON/OFF switching |
| SLIM DTL | ON<br>OFF | ENG | ON/OFF switching for mode which narrows detail |
| SUPER COLOUR | ON<br>OFF | ENG | ON/OFF switching for colour dynamic range expansion |
| CORNER DTL | ON<br>OFF | ENG | ON/OFF switching for mode which increases edge resolution |

## LEVEL 2/6 Screen

This page performs the camera setup level 2 settings.

```
        - LEVEL 2/6 -

  -SKIN TONE HUE     :103
   SKIN TONE LEVEL   :25
   SKIN TONE WIDTH   :15
   SKIN TONE CORING:15
   SKIN TONE ZEBRA   :OFF
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| SKIN TONE HUE | 103<br>⋮<br>143 | ENG | Skin tone hue setting |
| SKIN TONE LEVEL | 1<br>⋮<br>25<br>⋮<br>50 | ENG | Skin tone level setting |
| SKIN TONE WIDTH | 1<br>⋮<br>15<br>⋮<br>30 | ENG | Skin tone width setting |
| SKIN TONE CORING | 0<br>⋮<br>15 | ENG | Skin tone coring setting |
| SKIN TONE ZEBRA | ON<br>OFF | ENG | Skin tone zebra ON/OFF switching |

<Note>
Only numbers are displayed while the variable range of any item except SKIN TONE ZEBRA ON/OFF is being changed.

The underlined setting in the Variable range column indicates the preset mode.

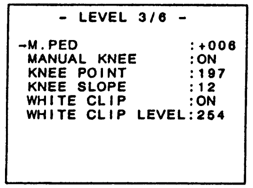
**Menu screen display methods**

**USER menu:** Setting the MENU switch to SET displays the USER menu.

**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## LEVEL 3/6 Screen

This page performs the camera setup level 3 settings.



```
  - LEVEL 3/6 -

-M.PED           :+006
 MANUAL KNEE     :ON
 KNEE POINT      :197
 KNEE SLOPE      :12
 WHITE CLIP      :ON
 WHITE CLIP LEVEL:254
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| M.PED | −128<br>:<br>+006<br>:<br>+127 | ENG | M.PED (Master pedestal level) setting |
| MANUAL KNEE | ON<br>OFF | ENG | Mode setting when AUTO KNEE switch is set to OFF |
| KNEE POINT | 197<br>:<br>219 | ENG | Manual knee point position setting |
| KNEE SLOPE | 0<br>:<br>12<br>:<br>25 | ENG | Manual knee inclination setting |
| WHITE CLIP | ON<br>OFF | | White clip ON/OFF switching |
| WHITE CLIP LEVEL | 238<br>:<br>254 | | White clip level setting |

The underlined setting in the Variable range column indicates the preset mode.

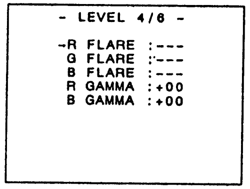
**Menu screen display methods**

**USER menu:** Setting the MENU switch to SET displays the USER menu.

**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## LEVEL 4/6 Screen

This page performs the camera setup level 4 settings.



```
  - LEVEL 4/6 -

-R FLARE  :---
 G FLARE  :---
 B FLARE  :---
 R GAMMA  :+00
 B GAMMA  :+00
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| R FLARE | 00<br>:<br>100 | ENG | Rch flare setting<br>The preset value differs according to the camera. |
| G FLARE | 00<br>:<br>100 | ENG | Gch flare setting<br>The preset value differs according to the camera. |
| B FLARE | 00<br>:<br>100 | ENG | Bch flare setting<br>The preset value differs according to the camera. |
| R GAMMA | −15<br>:<br>±00<br>:<br>+15 | ENG | Rch gamma compensation value for the master gamma. |
| B GAMMA | −15<br>:<br>±00<br>:<br>+15 | ENG | Bch gamma compensation value for the master gamma. |

The underlined setting in the Variable range column indicates the preset mode.

**Menu screen display methods**

**USER menu:** Setting the MENU switch to SET displays the USER menu.

**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## LEVEL 5/6 Screen

This page performs the recording level 5 settings.

```
   - LEVEL 5/6 -

-MATRIX TABLE :A
 MATRIX R-G   :+10
 MATRIX R-B   :+10
 MATRIX G-R   :+10
 MATRIX G-B   :+10
 MATRIX B-R   :+10
 MATRIX B-G   :+10
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| MATRIX TABLE | A<br>B | ENG | Colour adjustment table selection |
| MATRIX R–G | –25<br>:<br>+10<br>:<br>+25 | ENG | Colour adjustment |
| MATRIX R–B | –25<br>:<br>+10<br>:<br>+25 | ENG | Colour adjustment |
| MATRIX G–R | –25<br>:<br>+10<br>:<br>+25 | ENG | Colour adjustment |
| MATRIX G–B | –25<br>:<br>+10<br>:<br>+25 | ENG | Colour adjustment |
| MATRIX B–R | –25<br>:<br>+10<br>:<br>+25 | ENG | Colour adjustment |
| MATRIX B–G | –25<br>:<br>+10<br>:<br>+25 | ENG | Colour adjustment |

The underlined setting in the Variable range column indicates the preset mode.

<Note>
All settings are "00" for the preset mode of MATRIX TABLE B.

**Menu screen display methods**

**USER menu:** Setting the MENU switch to SET displays the USER menu.
**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## LEVEL 6/6 Screen

This page performs the camera setup level 6 settings.

```
   - LEVEL 6/6 -

-H PHASE COARSE    :07
 H PHASE FINE      :128
 SC PHASE COARSE   :0
 SC PHASE FINE     :128
 A.IRIS LEVEL      :062
 A.IRIS PEAK/AVE.  :060
 A.IRIS MODE       :NOR
 S.IRIS LEVEL      :075
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| H PHASE COARSE | 0<br>:<br>7<br>:<br>15 | ENG | H phase rough adjustment during GENLOCK mode. |
| H PHASE FINE | 0<br>:<br>128<br>:<br>255 | ENG | H phase fine adjustment during GENLOCK mode. |
| SC PHASE COARSE | 0<br>:<br>3 | ENG | SC phase rough adjustment during GENLOCK mode. |
| SC PHASE FINE | 0<br>:<br>128<br>:<br>255 | ENG | SC phase fine adjustment during GENLOCK mode. |
| A.IRIS LEVEL | 0<br>:<br>62<br>:<br>100 | ENG | Auto iris target value setting |
| A.IRIS PEAK/AVE. | 0<br>:<br>60<br>:<br>100 | ENG | Auto iris peak: average value ratio setting |
| A.IRIS MODE | NORMAL<br>CENTRE | ENG | Auto iris mode selection |
| S.IRIS LEVEL | 0<br>:<br>75<br>:<br>100 | ENG | Super iris target value setting (Backlight compensation mode) |

The underlined setting in the Variable range column indicates the preset mode.

**Menu screen display methods**

**USER menu:** Setting the MENU switch to SET displays the USER menu.
**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## VF OPERATION Screen

This page performs the viewfinder display settings.

```
       - VF OPERATION -

  →VF OUT          :Y
   VF DTL          :2
   ZEBRA1 DETECT:070
   ZEBRA2 DETECT:085
   ZEBRA2          :SPOT
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| VF OUT | Y<br>NAM<br>R<br>G<br>B | ENG | VF OUT selection |
| VF DTL | 0<br>⋮<br>2<br>⋮<br>4 | ENG | VF DTL selection |
| ZEBRA1 DETECT | 50<br>⋮<br>70<br>⋮<br>110 | ENG | ZEBRA1 DETECT level (% value) setting |
| ZEBRA2 DETECT | 50<br>⋮<br>85<br>⋮<br>110 | ENG | ZEBRA2 DETECT level (% value) setting |
| ZEBRA2 | ON<br>OFF<br>SPOT | ENG | ZEBRA2 ON/OFF switching and SPOT selection<br>*When ZEBRA2 is set to SPOT, set the ZEBRA2 DETECT value higher than the ZEBRA1 DETECT value. If the ZEBRA2 DETECT value is less than the ZEBRA1 DETECT value, the ZEBRA pattern will not be displayed. |

The underlined setting in the Variable range column indicates the preset mode.

**Menu screen display methods**

**USER menu:** Setting the MENU switch to SET displays the USER menu.

**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## LENS ADJ Screen

This page performs the lens adjustments. The ON/OFF status for each item is indicated by displaying an asterix (•) or period (·) in front of the item on the screen.

```
       - LENS ADJ -

      →•F2.8 ADJ
        ·F16 ADJ
```

•: ON
·: OFF

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| F2.8 ADJ | —— | ENG | Voltage is output only when selected by the cursor (arrow). |
| F16 ADJ | —— | ENG | Voltage is output only when selected by the cursor (arrow). |

<Note>
When using a lens which allows the lens iris open or close end to be adjusted, set either "F2.8 ADJ" or "F16 ADJ" to ON and repeatedly adjust the lens iris until it is "F2.8" or "F16", respectively. (Fujinon S18×6.7 BRM4/BERM4 lenses do not have this adjustment function.)

## MENU SELECT 1/3 Screen

This page performs the menu page display ON/OFF settings. The ON/OFF status for each item is indicated by displaying an asterix (•) or period (·) in front of the item on the screen.

```
   - MENU SELECT 1/3 -

     →•MARKER
       •VF DISPLAY
       •CAMERA ID
       ·SHUTTER SPEED
       •SYNCHRO SCAN
       ·!LED
       •SET UP CARD
       •MAIN FUNCTION
```

•: ON
·: OFF

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| MARKER | ON<br>OFF | ENG | MARKER item user menu display ON/OFF |
| VF DISPLAY | ON<br>OFF | ENG | VF DISPLAY item user menu display ON/OFF |
| CAMERA ID | ON<br>OFF | ENG | CAMERA ID item user menu display ON/OFF |
| SHUTTER SPEED | ON<br>OFF | ENG | SHUTTER SPEED item user menu display ON/OFF |
| SYNCHRO SCAN | ON<br>OFF | ENG | SYNCHRO SCAN item user menu display ON/OFF |
| ! LED | ON<br>OFF | ENG | ! LED item user menu display ON/OFF |
| SET UP CARD | ON<br>OFF | ENG | SET UP CARD item user menu display ON/OFF |
| MAIN FUNCTION | ON<br>OFF | ENG | MAIN FUNCTION item user menu display ON/OFF |

The underlined setting in the Variable range column indicates the preset mode.

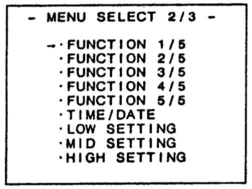
**Menu screen display methods**

**USER menu:** Setting the MENU switch to SET displays the USER menu.

**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## MENU SELECT 2/3 Screen

This page performs the menu page display ON/OFF settings. The ON/OFF status for each item is indicated by displaying an asterix (•) or period (·) in front of the item on the screen.



```
- MENU SELECT 2/3 -

→·FUNCTION 1/5
 ·FUNCTION 2/5
 ·FUNCTION 3/5
 ·FUNCTION 4/5
 ·FUNCTION 5/5
 ·TIME/DATE
 ·LOW SETTING
 ·MID SETTING
 ·HIGH SETTING
```

•: ON
·: OFF

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| FUNCTION 1/5 | ON<br>OFF | ENG | FUNCTION 1/5 item user menu display ON/OFF |
| FUNCTION 2/5 | ON<br>OFF | ENG | FUNCTION 2/5 item user menu display ON/OFF |
| FUNCTION 3/5 | ON<br>OFF | ENG | FUNCTION 3/5 item user menu display ON/OFF |
| FUNCTION 4/5 | ON<br>OFF | ENG | FUNCTION 4/5 item user menu display ON/OFF |
| FUNCTION 5/5 | ON<br>OFF | ENG | FUNCTION 5/5 item user menu display ON/OFF |
| TIME/DATE | ON<br>OFF | ENG | TIME/DATE item user menu display ON/OFF |
| LOW SETTING | ON<br>OFF | ENG | LOW SETTING item user menu display ON/OFF |
| MID SETTING | ON<br>OFF | ENG | MID SETTING item user menu display ON/OFF |
| HIGH SETTING | ON<br>OFF | ENG | HIGH SETTING item user menu display ON/OFF |

The underlined setting in the Variable range column indicates the preset mode.

**Menu screen display methods**

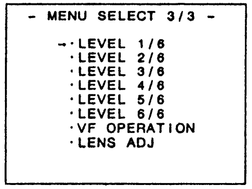
**USER menu:** Setting the MENU switch to SET displays the USER menu.

**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

---

## MENU SELECT 3/3 Screen

This page performs the menu page display ON/OFF settings. The ON/OFF status for each item is indicated by displaying an asterix (•) or period (·) in front of the item on the screen.



```
- MENU SELECT 3/3 -

→·LEVEL 1/6
 ·LEVEL 2/6
 ·LEVEL 3/6
 ·LEVEL 4/6
 ·LEVEL 5/6
 ·LEVEL 6/6
 ·VF OPERATION
 ·LENS ADJ
```

•: ON
·: OFF

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| LEVEL 1/6 | ON<br>OFF | ENG | LEVEL 1/6 item user menu display ON/OFF |
| LEVEL 2/6 | ON<br>OFF | ENG | LEVEL 2/6 item user menu display ON/OFF |
| LEVEL 3/6 | ON<br>OFF | ENG | LEVEL 3/6 item user menu display ON/OFF |
| LEVEL 4/6 | ON<br>OFF | ENG | LEVEL 4/6 item user menu display ON/OFF |
| LEVEL 5/6 | ON<br>OFF | ENG | LEVEL 5/6 item user menu display ON/OFF |
| LEVEL 6/6 | ON<br>OFF | ENG | LEVEL 6/6 item user menu display ON/OFF |
| VF OPERATION | ON<br>OFF | ENG | VF OPERATION item user menu display ON/OFF |
| LENS ADJ | ON<br>OFF | ENG | LENS ADJ item user menu display ON/OFF |

The underlined setting in the Variable range column indicates the preset mode.

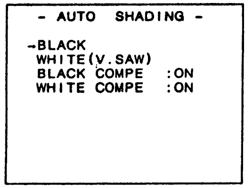
**Menu screen display methods**

**USER menu:** Setting the MENU switch to SET displays the USER menu.

**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## AUTO SHADING Screen

This page performs the auto shading settings. Align the arrow with the desired BLACK or WHITE item and press the UP or DOWN button to execute the setting.



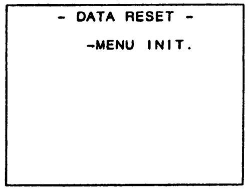
```
  - AUTO   SHADING -

 →BLACK
  WHITE(V.SAW)
  BLACK COMPE    :ON
  WHITE COMPE    :ON
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| BLACK | —— | ENG | Auto black shading (digital) activated |
| WHITE (V. SAW) | —— | ENG | Auto white shading (V. SAW) activated |
| BLACK COMPE | ON<br>OFF | ENG | Black compensation ON/OFF |
| WHTE COMPE | ON<br>OFF | ENG | White compensation ON/OFF |

The underlined setting in the Variable range column indicates the preset mode.

## DATA RESET Screen

This page resets the menu display item settings. Aligning the cursor (arrow) with the item and pressing the UP or DOWN button resets the settings.



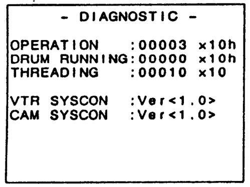
```
  - DATA RESET -

   →MENU INIT.
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| DATA RESET | —— | ENG | Sets the setting menu to the status when shipped from the factory. |

<Note>
The flare compensation value (LEVEL 4/6) and shading compensation value (AUTO SHADING) do not return to the default settings.

## DIAGNOSTIC Screen

This page displays the unit's operating conditions and software version.



```
   - DIAGNOSTIC -

OPERATION    :00003 x10h
DRUM RUNNING:00000 x10h
THREADING    :00010 x10

VTR SYSCON   :Ver<1.0>
CAM SYSCON   :Ver<1.0>
```

| Item | Variable range | VF display | Remarks |
|---|---|---|---|
| OPERATION | —— | ENG | Operating time with the power ON |
| DRUM RUNNING | —— | ENG | Drum rotating time |
| THREADING | —— | —— | Loading times |
| VTR SYSCON | —— | ENG | Software version display |
| CAM SYSCON | —— | ENG | Software version display |

**Menu screen display methods**

**USER menu:** Setting the MENU switch to SET displays the USER menu.

**ENG menu:** Holding down the SHIFT/ITEM and UP buttons simultaneously and setting the MENU switch to SET displays the ENG menu.

## Warning System

If trouble is detected immediately after the power is turned on or during operation, the display window (LCD), WARNING lamp, lamps inside the viewfinder, and warning tones from the speaker and earphone inform the operator of trouble.

| Item | Display window (LCD) | | | | Lamps | | Warning tone | Warning contents | VTR (section) operation | Countermeasures |
|---|---|---|---|---|---|---|---|---|---|---|
| | Warning display | Warning display status | Remaining battery level display | Remaining tape length display | WARNING lamp | REC lamp | | | | |
| RF | RF | Lighted *1) | | | Flashes 4 times per second | Flashes 4 times per second | Emitted 4 times per second *1) | Video head clogging, recording system trouble | Head clogging is detected and a warning tone emitted. Images may not be recorded properly. | Clean the heads. If images still cannot be recorded properly after the heads are cleaned, consult your dealer. |
| SERVO | SERVO | Lighted | | | Flashes 4 times per second | Flashes 4 times per second | Emitted 4 times per second | The servo is out of order. | Recording continues, but images may not be recorded properly. | Turn off the power and consult your dealer. (Lamps may flash briefly and then go off when tape running starts, but this does not indicate trouble.) |
| HUMID | HUMID | Lighted | | | Lighted | Flashes 4 times per second | Emitted 4 times per second *1)<br>Continuous tone*2) | Condensation | Recording continues, but stops if tape sticking occurs. Playback, fast forward and rewind operation stops. | If tape running stops and the HUMID display does not go off even when the power is turned off and then on again, wait until the display goes off. |
| SLACK | SLACK | Flashes | | | Flashes 4 times per second | Flashes 4 times per second | Continuous tone | Tape wind-up trouble | An error code appears in the time code display position of the display window (LCD) and the VTR stops. | Check the error code in the display window (see page 126) and consult your dealer. |

*1) During recording
*2) During playback, fast forward or rewind

<Note>
If a cleaning tape is not available to deal with video head clogging, etc., first establish the STOP mode and then press the STOP button again while the RESET button on the side panel is kept depressed. While these buttons are held down, the cleaning roller will clean the heads for a maximum of 10 seconds.

| Item | Display window (LCD) |  |  |  | Lamps |  | Warning tone | Warning contents | VTR (section) operation | Countermeasures |
|---|---|---|---|---|---|---|---|---|---|---|
|  | Warning display | Warning display status | Remaining battery level display | Remaining tape length display | WARNING lamp | REC lamp |  |  |  |  |
| TAPE END | E TAPE F | Flashes *1) |  | 1 of the 7 bars displayed; 5-0 display inside the viewfinder flashes | Flashes 1 time per second*1) | Flashes 1 time per second | Emitted 4 times per second | The tape is nearing its end. | Operation continues. | Replace the tape as necessary. |
|  |  | Flashes |  | All 7 bars displayed | Lighted | Flashes 4 times per second | Continuous tone | The tape has reached its end. | Recording, playback or fast forward operation stops. | Replace the cassette or rewind the tape. |
| BATTERY END | E BATT F | Flashes | 1 of the 7 bars displayed |  | Flashes 1 time per second | Flashes 1 time per second | Emitted 4 times per second*1) | The battery has almost run out. | Operation continues. | Replace the battery as necessary. |
|  |  | Flashes | All 7 bars displayed |  | Lighted | Flashes 4 times per second | Continuous tone | The battery has run out. | Operation stops. | Replace the battery. |

*1) During recording
*2) During playback, fast forward or rewind

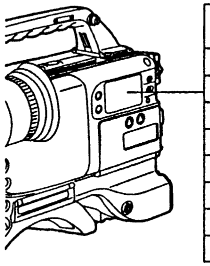
<Notes>

- When trouble occurs with the external VTR connected to the unit, warnings are displayed only by the unit's REC and TALLY lamps.
- When connecting the external VTR to the 26-pin output adaptor and recording simultaneously with the internal and external VTRs, the REC and TALLY lamps flash if trouble occurs in either VTR. Check the warning displays of each VTR to confirm the error contents.

Warning system priorities are as follows.
1 SLACK
2 BATTERY END
3 TAPE END
4 BATTERY NEAR END
5 TAPE NEAR END
6 HUMID
7 SERVO
8 RF

## Error Codes

When an error occurs in the unit for some reason or other, the following error codes appear in the display window.



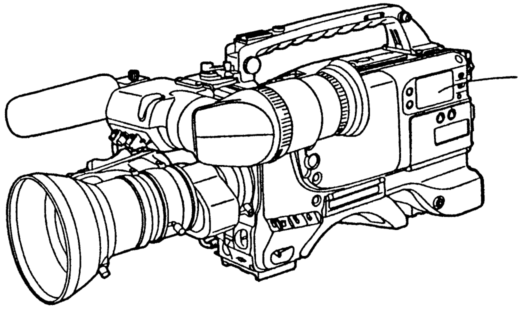
| Code No. | Contents |
|---|---|
| 8 | Solenoid trouble |
| 9 | The servo is not locked. |
| A | Condensation has occurred. |
| B | Supply reel trouble |
| C | Take-up reel trouble |
| D | Capstan trouble |
| E | Cylinder trouble |
| F | Loading trouble |

# Maintenance

## Condensation

If the unit is moved from a cold location to a warm location or used in areas with high humidity, the moisture in the air may adhere as water droplets on the head drum. This is called condensation, and if the tape is run under these conditions, it will easily stick to the drum. Therefore, the following points should be observed.

- If the unit is moved under conditions where condensation may occur, eject the tape.
- Before inserting the tape, set the POWER switch to ON and check that the HUMID display in the display window is not lighted. If the HUMID display is lighted, do not insert the tape until the display goes off.



The HUMID display is not lighted.

## Cleaning the Heads

Use the AJ-CL12MP cleaning cassette when head cleaning is required. Improper use of the cleaning cassette may damage the video heads. Therefore, read the Handling Instructions for the cleaning tape carefully before use.

## Cleaning the Viewfinder

- Do not use thinner or other solvents to remove dirt from the viewfinder.
- Wipe the lens with lens cleaner available on the market.
- Absolutely do not wipe the mirror. If dirt, etc. has adhered to the mirror, remove it using a air blower available on the market.

## Characteristic Phenomenon of CCD Cameras

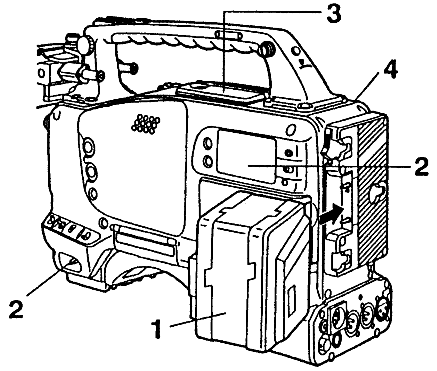
**Smear**

Smear occurs when shooting high-intensity subjects, and occurs more easily as the electronic shutter speed increases.

## Inspections Before Shooting

Perform the following inspections before shooting to check that all systems are operating properly. Checking the image with a colour monitor is recommended.

### Inspection preparations



**1** Insert a charged battery pack.

**2** Set the POWER switch to ON and check that the HUMID display does not appear and that five or more bars of the remaining battery level display are lighted.
- If the HUMID display appears, wait until the display goes off.
- If five or more bars of the remaining battery level display are not lighted, replace the battery pack with a sufficiently charged battery pack.

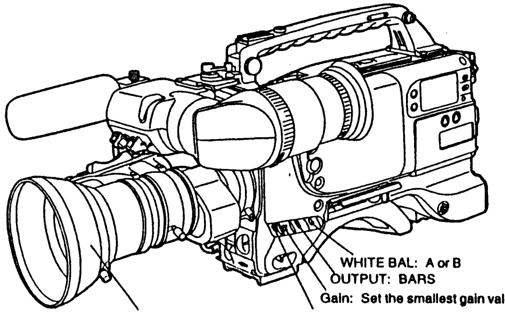
**3** Check that there are no cables, etc. around the cassette holder and top panel, and then press the EJECT button to open the cassette holder.

**4** Check the following items, and then insert a cassette and close the cassette holder.
- The cassette is not set to the write protect status.
- There is no slack in the tape.

## Inspections Before Shooting

### Inspecting the camera section

Set the switches as follows.



WHITE BAL: A or B
OUTPUT: BARS
Gain: Set the smallest gain value possible.
VTR SAVE/STBY: STBY
Iris: AUTO
Zoom: AUTO

## Inspecting the Viewfinder

1 Adjust the position of the viewfinder.

2 Check that the colour bar appears on the viewfinder screen, and then adjust the BRIGHT, CONTRAST and PEAKING controls so that the colour bar appears clearly on the viewfinder.

3 Check the following items.
  - (1) Set the MENU SET/OFF switch to SET and check that the setting menu appears on the viewfinder screen.
  - (2) Press the PAGE button and check that the setting menu page changes.
  - (3) Press the SHIFT/ITEM switch and check that the cursor moves within the page.
  - (4) Press the UP or DOWN button to check that the setting or ON/OFF display of the item selected with the cursor changes.

4 Set the OUTPUT/AUTO KNEE switch to CAM and switch the FILTER knob to 1, 2, 3 and 4. Check that the number of the FILTER display on the viewfinder screen changes in accordance with the knob position.

5 Perform the following operations to check that the (!) lamp lights when the items set to ON at the (!) LED page are operated.
  - (1) Set the gain to any value other than 0 dB with the GAIN switch.
  - (2) Set the SHUTTER switch to ON.
  - (3) Set the WHITE BAL switch to PRST.
  - (4) Insert the lens extender.
  - (5) Set the FILTER knob to any position other than "1".

6 Press the SHUTTER switch repeatedly from the ON position to the SEL side and check that the shutter setting on the viewfinder screen changes.

7 Aim the lens at an appropriate subject and turn the focus ring to bring the subject into focus. Check the image appearing in the viewfinder.

8 Set both the AUDIO IN CH1 and CH2 switches to FRONT [MIC] and set LEVEL METER on the VF DISPLAY page of the setting menu to ON. Check that the audio level appears on the viewfinder screen when sound is input from the microphone connected to the MIC IN jack on the front panel. Then, check that the audio level disappears from the viewfinder screen when LEVEL METER on the VF DISPLAY page of the setting menu is set to OFF.

9 Check that the zebra pattern appears on the viewfinder screen when the ZEBRA switch is set to ON, and disappears when the ZEBRA switch is set to OFF.

<Note>
The items and functions in steps 3 to 6 may not be displayed or may not operate depending on the setting conditions. Set the unit to engineer mode, set DISPLAY MODE on the VF DISPLAY page of the setting menu to "3", and then set the required items at the SHUTTER SPEED, (!) LED and MENU SELECT 1/3 to 3/3 pages.

## Inspecting the Iris and Zoom Functions

1 Set the zoom to electric zoom mode and check the electric zoom operation. Check that the image changes to telephoto and wide angle.

2 Set the zoom to manual zoom mode and check the manual zoom operation. Turn the manual zoom lever and check that the image changes to telephoto and wide angle.

3 Set the iris to automatic adjustment mode and aim the lens at subjects with differing brightness to check that the automatic iris adjustment functions.

4 Set the iris to manual adjustment mode and turn the iris ring to check the manual iris adjustment.

5 Hold down the instant iris automatic adjustment button and aim the lens at subjects with differing brightness to check the instant iris automatic adjustment performance.

6 Return the iris to automatic adjustment mode and change the GAIN switch setting to L, M and H to check the following items.
  - The iris is adjusted with respect to subjects with the same brightness in accordance with the switch setting.
  - The gain value display on the viewfinder screen changes in accordance with the switch setting.

7 When a lens with an extender is mounted, set the extender to the used position to check that the extender functions properly.

Perform "(1) Tape Running Inspections" to "(4) Earphone and Speaker Inspections" below consecutively.

## (1) Tape Running Inspections

1 Set the VTR SAVE/STBY switch to SAVE and check that the VTR SAVE lamp inside the viewfinder lights.

2 Set the VTR SAVE/STBY switch to STBY and check that the VTR SAVE lamp goes off.

3 Set the F-RUN/R-RUN switch to R-RUN.

4 Set the DISPLAY switch to CTL.

5 Press the unit's VTR START button and check the following items.
  - The tape reels turn.
  - The counter display number changes.
  - The REC lamp inside the viewfinder lights.
  - The RF and SERVO lamps in the display window do not light.

6 Press the unit's VTR START button again. Check that the tape stops and the REC lamp inside the viewfinder goes off.

7 Check the same operations as in steps 5 and 6 using the VTR button of the lens.

8 Press the RESET button and check that the counter display number changes to "00:00:00:00".

9 Set the LIGHT switch to ON and check that the display window is illuminated.

10 Press the REW button and then press the PLAY button after the tape has rewound for a while. Check that the recording, playback and rewind operations are performed properly.

11 Press the FF button and check that fast forward operation is performed properly.

## (2) Inspection of Audio Level Automatic Adjustment Functions

1 Set the AUDIO SELECT CH1/CH2 switch to AUTO.

2 Set the AUDIO IN CH1/CH2 switch to FRONT [MIC].

3 Aim a microphone connected to the MIC IN jack at an appropriate sound source and check that the level display for both CH1 and CH2 changes in accordance with the sound level.

## (3) Inspection of Audio Level Manual Adjustment Functions

1 Set the AUDIO IN CH1/CH2 switch to FRONT [MIC].

2 Set the AUDIO SELECT CH1/CH2 switch to MAN.

3 Turn the AUDIO LEVEL CH1/CH2 controls and check that the level display increases when the controls are turned to the right.

## (4) Earphone and Speaker Inspections

1 Set the VTR SAVE/STBY switch to STBY.

2 Turn the MONITOR control and check that the speaker volume changes.

3 Connect an earphone to the PHONES jack. Check that the sound to the speaker is cut off and that the microphone sound can be heard from the earphone.

4 Turn the MONITOR control and check that the earphone volume changes.

## (5) Inspections when Using an External Microphone

1 Connect an external microphone to the AUDIO IN CH1 and CH2 connectors.

2 Set the AUDIO IN CH1/CH2 switch to REAR [MIC].

3 Aim the microphone at a sound source and check that the audio level meter in the display window and the audio level display inside the viewfinder change in accordance with the sound level. Each channel can also be checked separately by connecting a single microphone to each channel.

## (6) Time Code and User Bit-Related Inspections

1 Set the user bit as necessary.
- See "Setting the User Bit" (page 78) for a description of setting methods.

2 Set the time code.
- See "Setting the Time Code" (page 77) for a description of setting methods.

3 Set the F-RUN/R-RUN switch to R-RUN.

4 Press the VTR START button.
Check that the tape runs and the counter display number changes.

5 Press the VTR START button again.
Check that the tape stops and the counter display number stops changing.

6 Set the F-RUN/R-RUN switch to F-RUN.
Check that the counter display number changes regardless of the tape running status.

7 Set the DISPLAY switch to UB.
Check that the set user bit is displayed.

# SECTION 2

# MAINTENANCE & DISASSEMBLY PROCEDURES

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# 1. AJ-D700 Maintenance Parts
## 1-1. Maintenance Schedule

| No. | Name | Part Number | Using Hours (hrs) | | | |
|---|---|---|---|---|---|---|
| | | | 500 | 1000 | 2000 | 3000 |
| | Tape Path Cleaning | | ● | ● | ● | |
| 1 | Cylinder Unit | VEG1337 | | ● | ● | ◎ |
| 2 | A/C Head | VBR0301 | | | | ◎ |
| 3 | S Reel(Rotor Unit) | VXP1681 | | | | ◎ |
| 4 | T Reel(Rotor Unit) | VXP1681 | | | | ◎ |
| 5 | Loading Motor 1 Unit | VEM0584 | | | | ◎ |
| 6 | Pinch Arm Unit | VXL2684 | | ●*1 | ●*1 | ◎ |
| 7 | M Cassette Brake Base Unit | VXA5792 | | | | ◎ |
| 8 | Mode Switch Unit | VES0814 | | | | ◎ |
| 9 | Cleaning Arm Unit | VXL2693 | | ● | ● | ◎ |
| 10 | Pinch Solenoid | VSJ0217 | | | | ◎ |
| 11 | MIC Base Unit | VXA5583 | | | | ◎ |
| 12 | S1 Loading Arm Unit | VXL2682 | | | | ◎ |
| 13 | T1 Boat Unit | VXA5568 | | | | ◎ |
| 14 | Cleaner Solenoid | VSJ0222 | | | | ◎ |
| 15 | S5 Post Unit | VXP5553 | | | | ◎ |
| 16 | Tension Arm Unit | VXL2580 | | | | ◎ |
| 17 | Main Cam Gear | VDG1168 | | | | ◎ |
| | Cassette Up Unit | VXA5601 | | | | ●*2 |
| | Mech. Chassis Unit | VXY1229 | | | | ● |

**Note:** Using Hours are based on the head rotation hours.

Using hours are recommendation. It may depend on temperature, humidity or dusty.

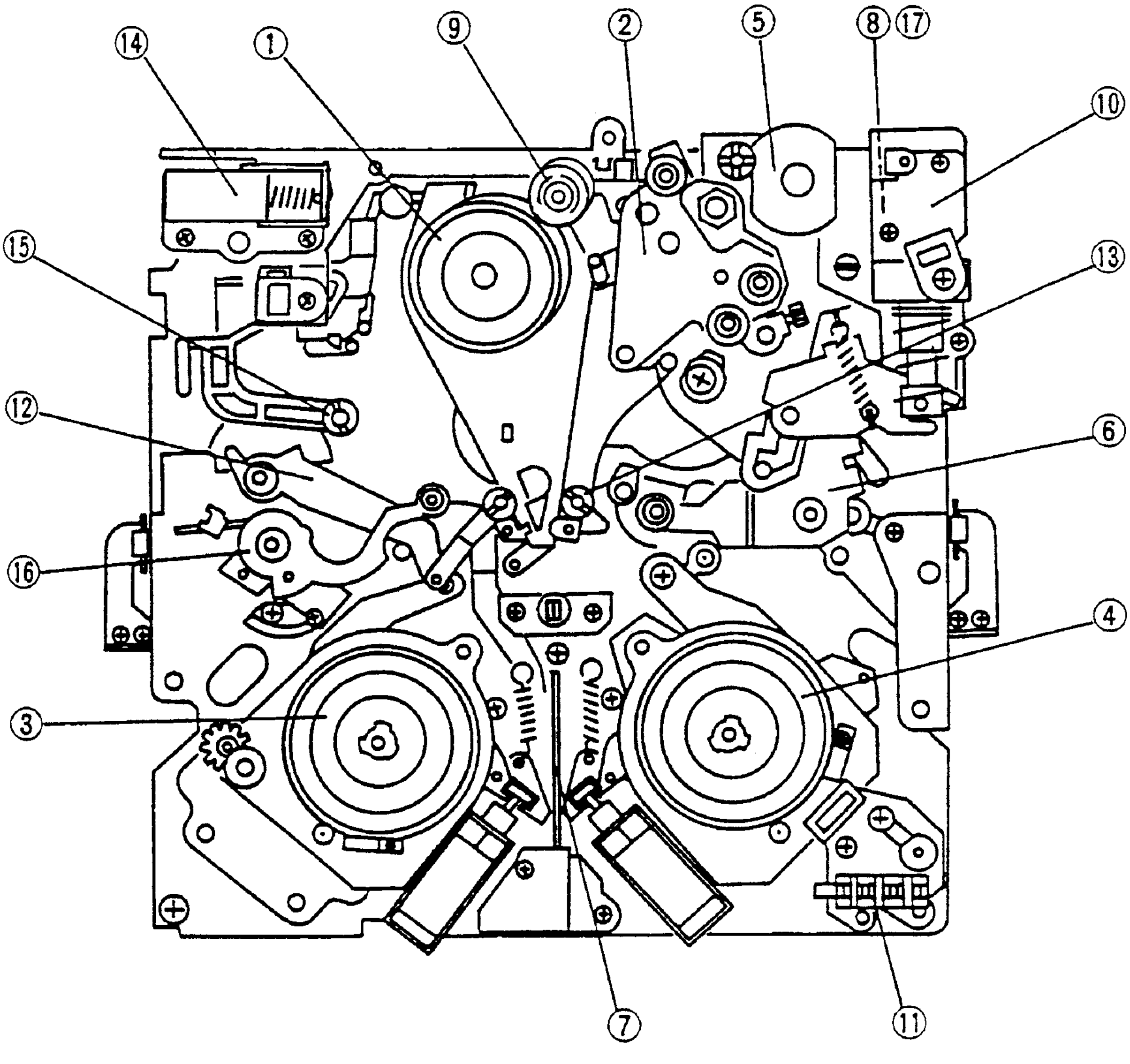
Using hours are listed as the reference of maintenance. They do not mean guarantee hours.

◎ : These parts are included in Mech. Chassis Unit. Replacing Mech. Chassis Unit is recommended.

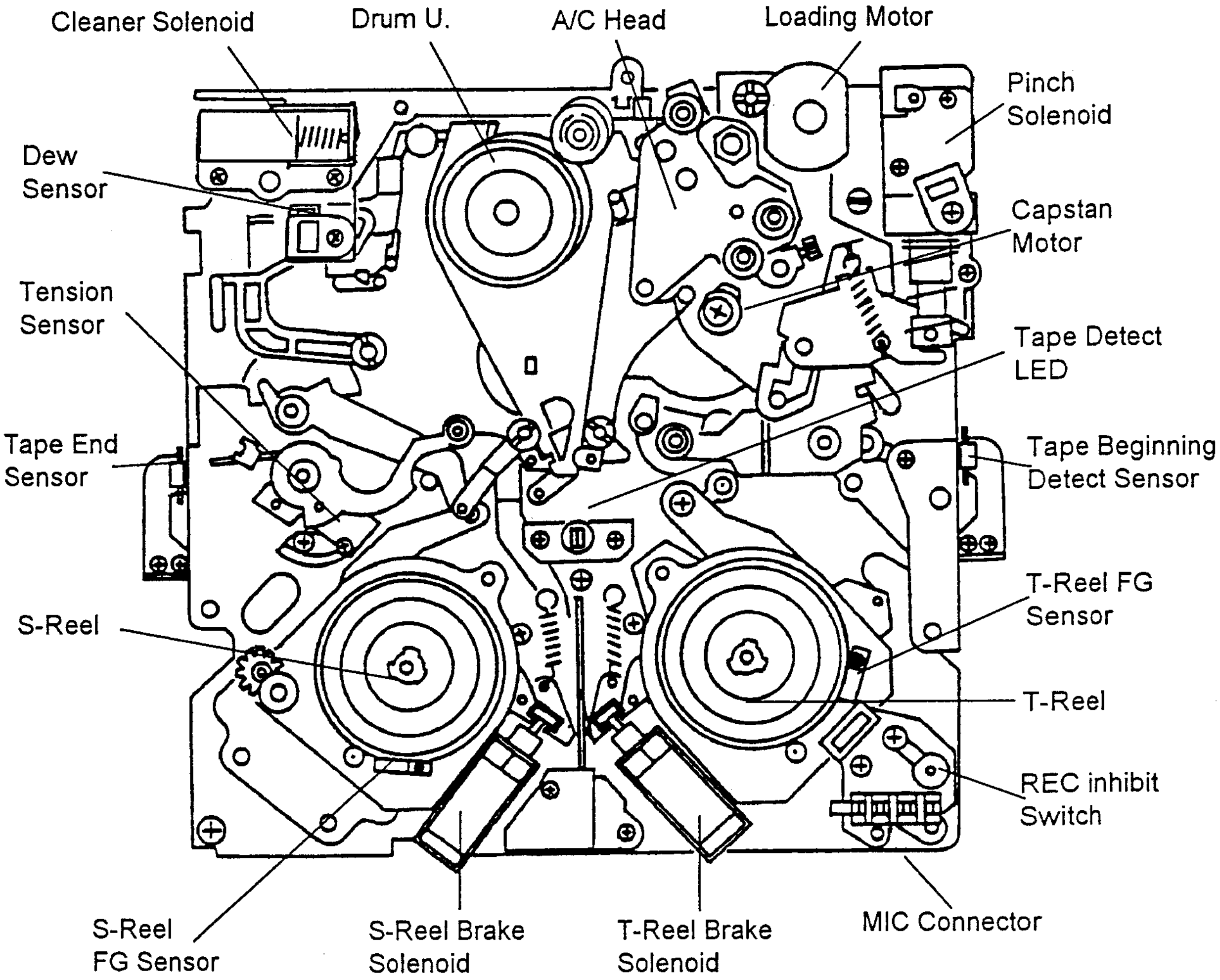
*1. The lubrication is necessary when replacing the Pinch Arm Unit.

*2. The Cassette Up Unit is a part of Mech. Chassis Unit.

## 1-2. Parts Location

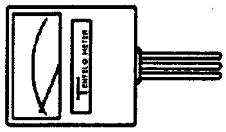
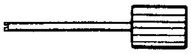
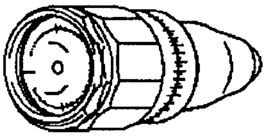
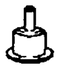
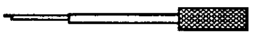
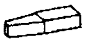
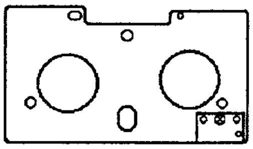
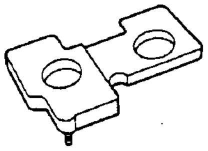
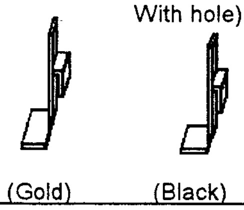
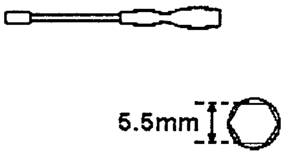
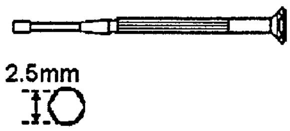
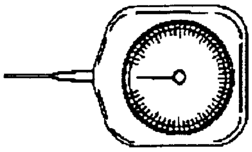
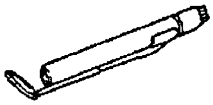
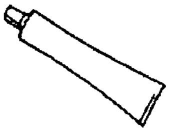
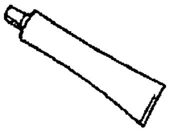
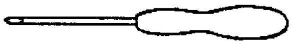
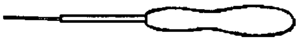
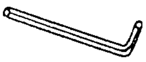
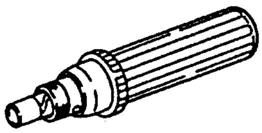
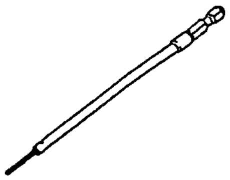

⑭
①
⑨
②
⑤
⑧⑰
⑩
⑮
⑬
⑫
⑥
⑯
④
③
⑦
⑪

## 2. Sensors Location

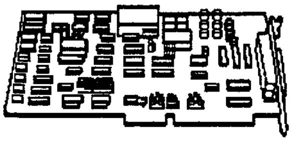

Cleaner Solenoid
Drum U.
A/C Head
Loading Motor
Pinch Solenoid
Dew Sensor
Capstan Motor
Tension Sensor
Tape Detect LED
Tape End Sensor
Tape Beginning Detect Sensor
T-Reel FG Sensor
S-Reel
T-Reel
REC inhibit Switch
S-Reel FG Sensor
S-Reel Brake Solenoid
T-Reel Brake Solenoid
MIC Connector

# 3. Jig & Tools

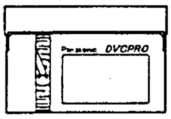
| Fig | ITEM | PART No. | JIG & EQUIPMENT | AJ-D700 | AJ-D750 | Remark |
|---|---|---|---|---|---|---|
| 1 | Jig Tool | VFK1145 | Back Tension Meter(T2-M30-P) | yes | yes | |
| 2 | | VFK1149 | Post Driver | yes | yes | |
| 3 | | VFK71 | Dial Torque Gauge(150g) | yes | yes | |
| 4 | | VFK1191 | Dial Torque Gauge(45g) | yes | yes | |
| 5 | | VFK1152 | Dial Torque Gauge Adaptor | yes | yes | |
| 6 | | VFK0357 | Eccentric Screwdriver(1.5) | yes | yes | |
| 7 | | VFK1154 | Post Height Fixture | yes | yes | |
| 8 | | VFK1153 | Mech. Neutral Plate(Post) | yes | yes | |
| 9 | | VFK1157 | Mech. Neutral Plate(Cassette) | yes | yes | |
| 10 | | VFK1155 | Neutral Position Tool(Gold) | yes | yes | |
| 11 | | VFK1156 | Neutral Position Tool(Black) | yes | yes | |
| 12 | | VFK1208 | Neutral Position Tool(Black With Hole) | yes | yes | |
| 13 | | VFK1150 | Nut Driver(5.5mm) | yes | yes | |
| 14 | | VFK1151 | Nut Driver(2.5mm) | yes | yes | |
| 15 | | VFK1188 | Dial Tension Gauge(30g) | yes | yes | |
| 16 | | VFK0948 | Check Light | yes | yes | |
| 17 | | VFK0749 | Froiral Grease (for plastic) | yes | yes | |
| 18 | | MOR265 | Morlytone Grease (for metal) | yes | yes | |
| 19 | | VFK1146 | Philips Driver(Fine)(00-75) | yes | yes | |
| 20 | | VFK1147 | Philips Driver(Fine)(0-100) | yes | yes | |
| 21 | | VFK1148 | Hex.Driver(1.5) | yes | yes | |
| 22 | | VFK1178 | Hex.Driver(0.89) | yes | yes | |
| 23 | | VFK1179 | Hex.Driver(0.71) | yes | yes | |
| 24 | | VFK1190 | HEX. Wrench | yes | yes | |
| 25 | | VFK1209 | Torque Driver(0.4-3Kg) | yes | yes | |
| 26 | | VFK0912 | Post Axis Driver(1.5mm) | yes | yes | |
| 27 | | DAQ-12 | A/D Board | yes | yes | Purchase locally |
| 28 | | VFM3580KM | Alignment Tape(No.1) | yes | yes | for NTSC |
| 29 | | VFM3581KM | Alignment Tape(No.2) | yes | yes | for NTSC |
| 30 | | VFM3582KM | Alignment Tape(No.3) | yes | yes | for NTSC |
| 31 | | AJ-CL12MP | Cleaning Tape | yes | yes | SALES |
| 32 | | VFK1159 | LISTA Software | yes | yes | |
| 33 | | VFK1186 | LISTA CABLE | yes | yes | |
| 34 | | VFK1194 | EXTENSION BOARD | yes | no | |
| 35 | | VFK1192 | F EXTENSION BOARD | no | yes | |
| 36 | | VFK1193 | H EXTENSION BOARD | no | yes | |
| 37 | | VFK1162 | EVR Tool Software | yes | no | |
| 38 | | VFK1158 | B.E.R. Counter Tool | yes | no | |
| 39 | | VFK1185 | B.E.R. Counter Cable | yes | no | |
| 40 | | VFKW1000AA | EVR I/F Box Unit | yes | no | |
| 41 | | VFKW1000C | EVR RS232C Cable | yes | no | |
| 42 | | VFK1180 | EVR SUB I/F Unit | yes | no | |
| 43 | | VFK1187 | EVR Cable | yes | no | |
| 44 | | VFK1210 | Multi-Canon Cable | yes | no | |
| 45 | | VFK0369 | Tweezers | yes | yes | |
| 46 | | VFK0371 | Radio Prier | yes | yes | |
| 47 | | VFK0372 | Cutter Prier | yes | yes | |
| 48 | | VFK0338 | Trimmer Adjustment Driver | yes | yes | |
| 49 | | VFK0337 | Philips Driver | yes | yes | |
| 50 | | VFM3000EDS | Alignment Tape(DV LISTA) | no | yes | |
| 51 | | VFM3010EDS | Alignment Tape(DV Color Bar) | no | yes | for NTSC |
| 52 | | VFM3680KM | Alignment Tape(No.1) | yes | yes | for PAL |
| 53 | | VFM3681KM | Alignment Tape(No.2) | yes | yes | for PAL |
| 54 | | VFM3682KM | Alignment Tape(No.3) | yes | yes | for PAL |
| 55 | | VFM3110EDS | Alignment Tape(DV Color Bar) | no | yes | for PAL |

|  |  |  |  |
|---|---|---|---|
| 1 VFK1145<br>Back Tension Meter<br> <br>Model:T2-M30-P | 2 VFK1149<br>Post Driver<br> | 3 VFK71 (150g)<br>4 VFK1191(45g)<br>Dial Torque Gauge<br> | 5 VFK1152<br>Dial Torque Gauge<br>Adapter<br> |
| 6 VFK0357($\phi$ 1.5)<br>Eccentric Screwdriver<br> | 7 VFK1154<br>Post Height Fixture<br> | 8 VFK1153<br>Mech Neutral Plate(Post)<br> | 9 VFK1157<br>Mech Neutral Plate<br>(cassette)<br> |
| 10 VFK1155 (REV, Gold)<br>11 VFK1156 (PLAY, Black)<br>12 VFK1208(Neutral,Black<br>With hole)<br> | 13 VFK1150<br>Nut Driver(5.5mm)<br> | 14 VFK1151<br>Nut Driver(2.5mm)<br> | 15 VFK1188(30g)<br>Dial Tension Gauge<br> |
| 16 VFK0948(or purchase<br>locally)<br>Check Light<br> | 17 VFK0749<br>Froiral Grease(White)<br>(for plastic part)<br> | 18 MOR265<br>Morlytone Grease(Black)<br>(for metal part)<br> | 19 VFK1146 (00 x 75)<br>20 VFK1147 (0 x 100)<br>Philips Driver<br> |
| 21 VFK1148(1.5mm)<br>22 VFK1178(0.89mm)<br>23 VFK1179(0.71mm)<br>Hex. Driver<br> | 24 VFK1190 (1.5mm)<br>Hex. Wrench<br> | 25 VFK1209<br>Torque Driver(0.4-3Kg)<br> | 26 VFK0912<br>Post Axis Driver(1.5mm)<br> |

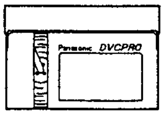
27 DAQ-12
A/D Converter Board
(For Quatech. Purchase Locally)



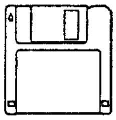
28 VFM3580KM
29 VFM3581KM
30 VFM3582KM
DVC PRO Alignment Tape



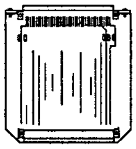
31 AJ-CL12MP
Cleaning Tape



32 VFK1159
LISTA Software
33 VFK1186
LISTA Cable

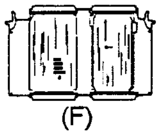


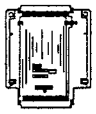
34 VFK1194
Extension Board



Use for AJ-D700

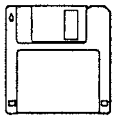
35 VFK1192 ---(F)
36 VFK1193 ---(H)
Extension Board


(F)


(H)

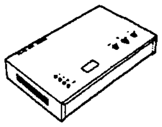
Use for AJ-D750

37 VFK1162
EVR Tool Software



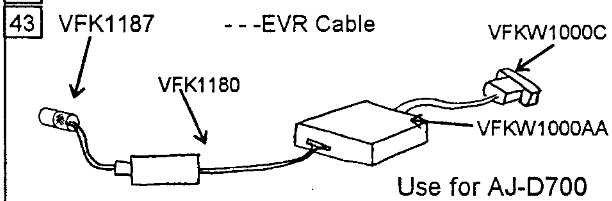
Use for AJ-D700

38 VFK1158
B.E.R. Counter Tool
39 VFK1185
B.E.R. Counter Cable



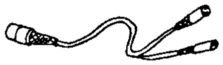
Use for AJ-D700

40 VFKW1000AA ---EVR I/F Box Unit
41 VFKW1000C ---EVR RS232C Cable
42 VFK1180 ---EVR SUB I/F Unit
43 VFK1187 ---EVR Cable



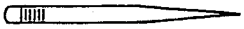
Use for AJ-D700

44 VFK1210
Multi-Canon Cable

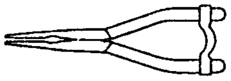


Use for AJ-D700

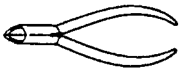
45 VFK0369
Tweezers



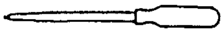
46 VFK0371
Radio Prier



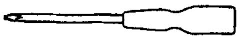
47 VFK0372
Cutter Prier



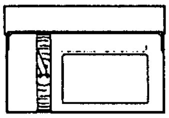
48 VFK0338
Trimmer Adjustment Driver



49 VFK0337
Philips Driver

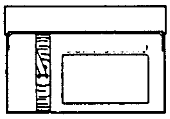


50 VFM3000EDS
DV Alignment Tape°
(LISTA)



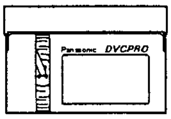
Use for AJ-D750

51 VFM3010EDS
DV Alignment Tape
(Color Bar)

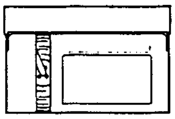


Use for AJ-D750

52 VFM3680KM
53 VFM3681KM
54 VFM3682KM
DVC PRO Alignment Tape



55 VFM3110EDS
DV Alignment Tape
(Color Bar)



Use for AJ-D750

# Recommended Test And Service Equipment

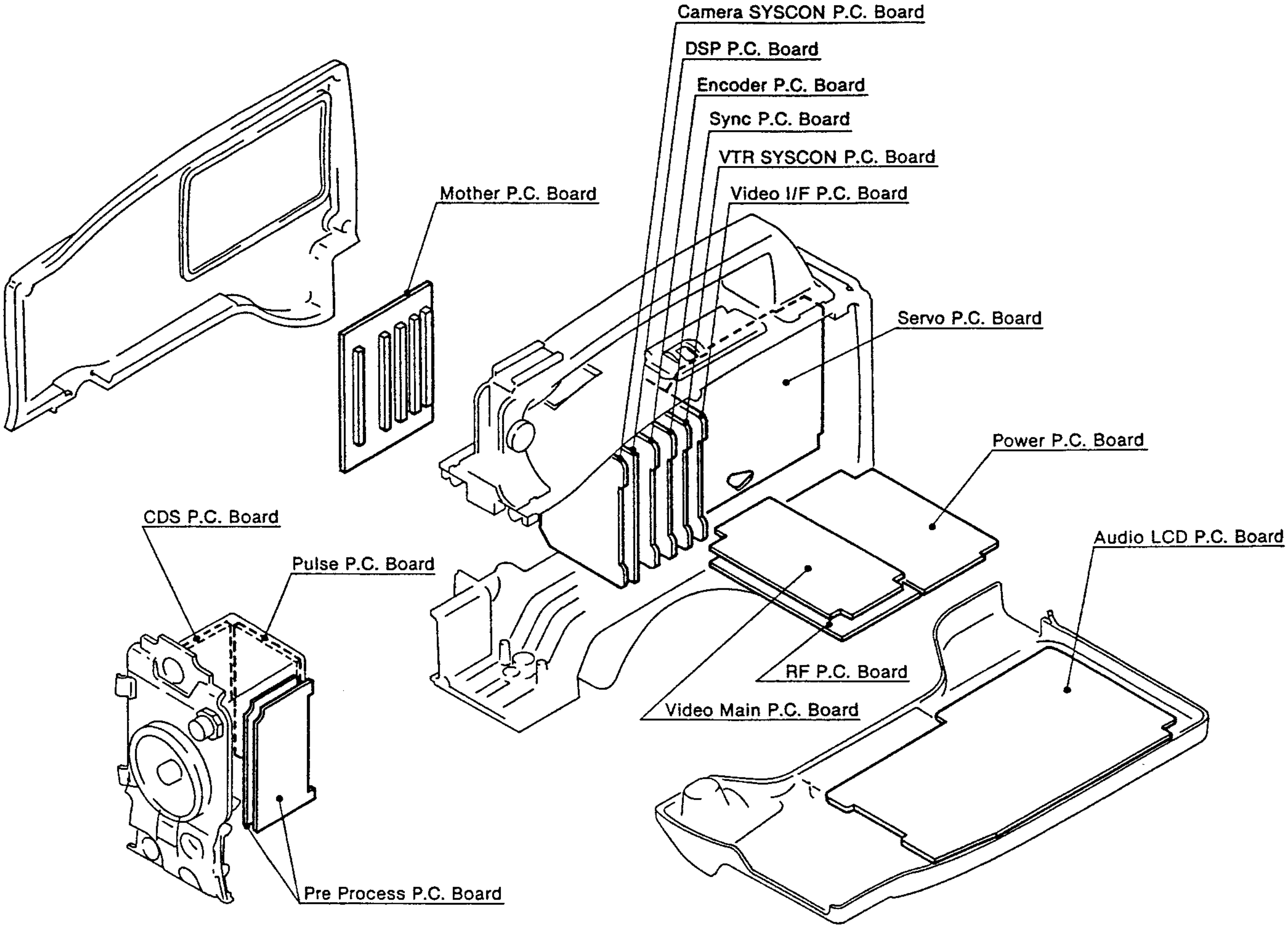
## NTSC

| Part No. | Name | Remark |
|---|---|---|
| TSG130A(OP.04) | Analog Component Signal Generator | TEKTRONIX |
| 2467B | 400MHz Oscilloscope | TEKTRONIX |
| 1760(OP.SC)<br>or 1780R | SCH Meter | TEKTRONIX |
| 520A | Vector Scope | TEKTRONIX |
|  | Digital Volt Meter |  |
|  | Frequency Counter |  |
|  | VTVM | Frequency Band Width 4Hz-500KHz |
| HP8591A | Spectrum Analyzer | Hewlett-Packard |
|  | Audio Analyzer |  |

## PAL

| Part No. | Name | Remark |
|---|---|---|
| TSG131A(OP.04) | Analog Component Signal Generator | TEKTRONIX |
| 2467B | 400MHz Oscilloscope | TEKTRONIX |
| 1751(OP.SC)<br>or 1781R | SCH Meter | TEKTRONIX |
|  | Digital Volt Meter |  |
|  | Frequency Counter |  |
|  | VTVM | Frequency Band Width 4Hz-500KHz |
| HP8591A | Spectrum Analyzer | Hewlett-Packard |
|  | Audio Analyzer |  |

# 4. Boards Location


Camera SYSCON P.C. Board
DSP P.C. Board
Encoder P.C. Board
Sync P.C. Board
VTR SYSCON P.C. Board
Mother P.C. Board
Video I/F P.C. Board
Servo P.C. Board
Power P.C. Board
Audio LCD P.C. Board
CDS P.C. Board
Pulse P.C. Board
RF P.C. Board
Video Main P.C. Board
Pre Process P.C. Board

# 5. Alignment Tapes

## DVCPRO Alignment Tape

### for NTSC

**VFM3580KM (NTSC)**

| Time | Video | | PCM | | CUE | |
|---|---|---|---|---|---|---|
| (min) | Signal | Purpose | Signal | Purpose | Signal | Purpose |
| 0:00 | Color Bar SMPTE(75%) | Composite Video Level Confirmation | 1kHz -20dB | Audio Level Confirmation | 1kHz 0VU | CUE Level Confirmation |
| 7:00 | Color Bar Full Field(75%) | Component Video Level Confirmation | | | | |
| 14:00 | H Sweep | Frequency Response | | | 6kHz 0VU | A/C Head Azimuth |
| 18:00 | Bowtie(500k) | Y/C Timing | | | | |
| 22:00 | Pulse&Bar | Y/C Timing | | | 1kHz 300Hz～6kHz | Frequency Response |
| 26:00<br>30:00 | Area Markers | | | | | |

**VFM3581KM (NTSC)**

| Time(min) | Signal |
|---|---|
| 0:00～20:00 | ITI Pattern |

**VFM3582KM (NTSC)**

| Time(min) | Signal |
|---|---|
| 0:00～10:00 | X Value |

### for PAL

**VFM3680KM (PAL)**

| Time | Video | | PCM | | CUE | |
|---|---|---|---|---|---|---|
| (min) | Signal | Purpose | Signal | Purpose | Signal | Purpose |
| 0:00 | Color Bar 100% | Video Level Confirmation | 1kHz -18dBu | Audio Level Confirmation | 1kHz Reference level | CUE Level Confirmation |
| 10:00 | H Sweep | Frequency Response | | | | |
| 14:00 | Area Markers | | | | 6kHz Reference level | A/C Head Azimuth |
| 18:00 | Bowtie(500k) | Y/C Timing | | | | |
| 22:00 | Pulse & Bar | Y/C Timing | | | 1kHz 300Hz~6kHz | Frequency Response |
| 26:00<br>30:00 | Multi Pulse | Y/C Timing | | | | |

**VFM3681KM (PAL)**

| Time (min) | Signal |
|---|---|
| 0:00 ~ 20:00 | ITI Pattern |

**VFM3682KM (PAL)**

| Time (min) | Signal |
|---|---|
| 0:00 ~ 10:00 | X Value |

# 6. Service Menu

This menu allows **service personnel** to service the AJ-D700. Adjustment procedures give a detail of how to use.

```
                SERVICE ADJ

GAMMA(SERV)         :     ON
R GAMMA(SERV)       :     -----
B GAMMA(SERV)       :     -----
TEST PULSE          :     OFF
ECU CONNECT         :     ECU
CONCEAL             :     ON
INNER ECC           :     ON
OUTER ECC           :     ON
IF ADJ              :     OFF
SERVO MODE          :     ATF
```

This menu sets the modes for servicing.

| ITEM | RANGE | PRESET | REMARK |
|---|---|---|---|
| GAMMA (SERV) | ON/OFF | ON | GAMMA settings become effective. |
| R GAMMA (SERV) | -10~+10 | | Setting of Rch GAMMA. |
| B GAMMA (SERV) | -10~+10 | | Setting of Bch GAMMA. |
| TEST PULSE | ON/OFF | OFF | TEST PULSE becomes available. |
| ECU CONNECT | ECU/EVR | ECU | Connection with ECU connector. |
| CONCEAL | ON/OFF | ON | |
| INNER ECC | ON/OFF | ON | |
| OUT ECC | ON/OFF | ON | |
| IF ADJ | ON/OFF | OFF | Turn ON when adjusting VTR I/F. |
| SERVO MODE | ATF/CTL | ATF | Selection of SERVO MODE |

This menu allows **service personnel** to service the AJ-D700. Adjustment procedures give a detail of how to use.

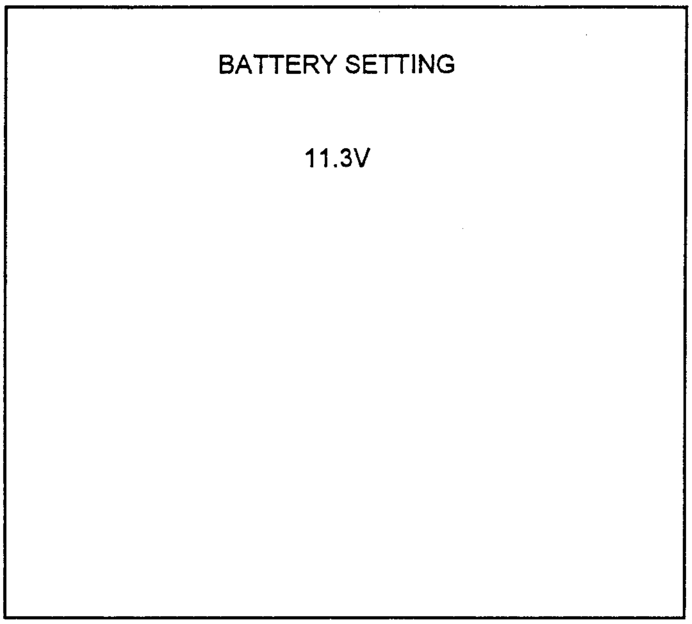
```
VTR D/A DATA

(01) 98 (02) 68 (03) 7B (04) B0
(05) 00 (06) 00 (07) 8F (08) 92
(09) 41 (0A) 44 (0B) 83 (0C) 54
(0D) 50 (0E) BD(0F) B4 (10) D0
(11) 3B (12) 88 (13) 88 (14) 00
(15) 00 (16) 00 (17) 00 (18) 00
(19) 8B (19) 92 (1A) 74 (1B) 87
(1D) 7F (1E) 64 (1F) 4F (20) 9D
(21) AC(22) 00 (23) 00 (24) FF
```

The data which are adjusted by EVR are displayed.

| ITEM | RANGE | PRESET | REMARK |
|---|---|---|---|
| (00)~(24) | | | Only displayed. |

This menu allows **service personnel** to service the AJ-D700. Adjustment procedures give a detail of how to use.



BATTERY SETTING

11.3V

The warning is given when the battery voltage is less than the above value.

| ITEM | RANGE | PRESET | REMARK |
|---|---|---|---|
| BATTERY BEFORE END | 11.0V~13.0V | 11.3V | Adjusted by 0.1V step. |

This menu allows **service personnel** to service the AJ-D700. Adjustment procedures give a detail of how to use.

WHITE SHADING

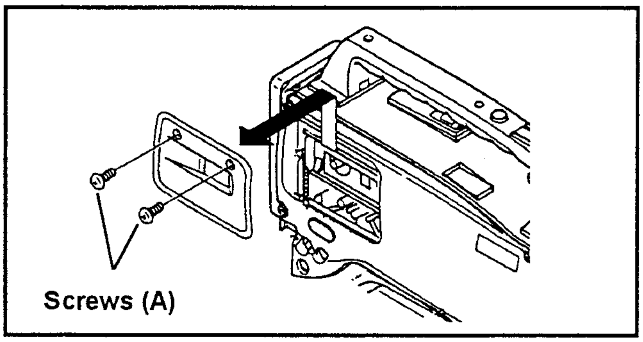
WHITE(DIGITAL)

| ITEM | RANGE | PRESET | REMARK |
|---|---|---|---|
| WHITE(DIGITAL) | | | Execute the Auto White Shading(Digital). |

# 7. Disassembly Procedures

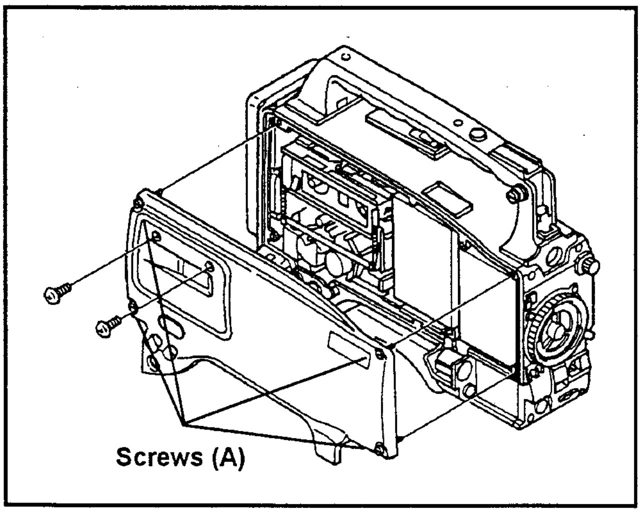
## 7-1. Removal of Cassette Cover

Remove the 2 screws (A). Slide the cover upward and remove it.



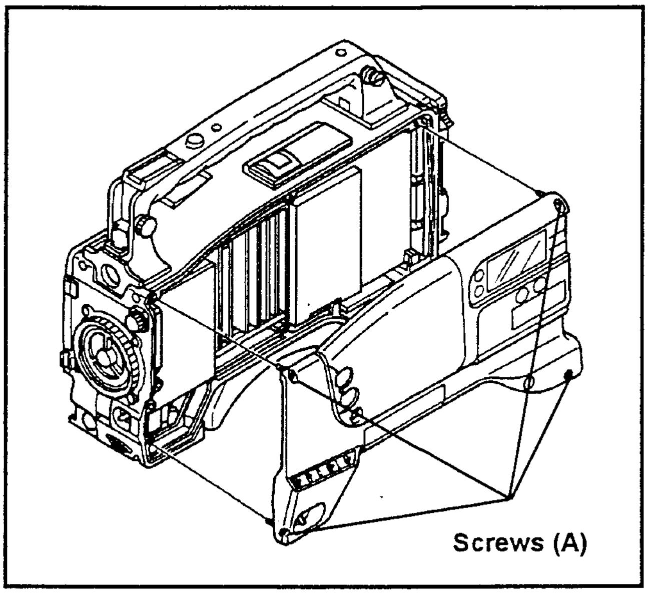
## 7-2. Removal of Left Side Panel

After removing the cassette cover according to 2-1., loosen the 4 screws (A) and remove the panel.



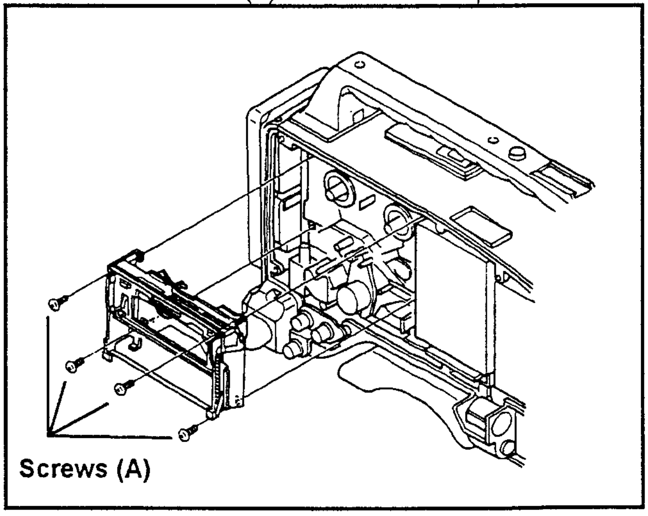
## 7-3. Removal of Right Side Panel

Loosen the 4 screws (A) and remove the panel.



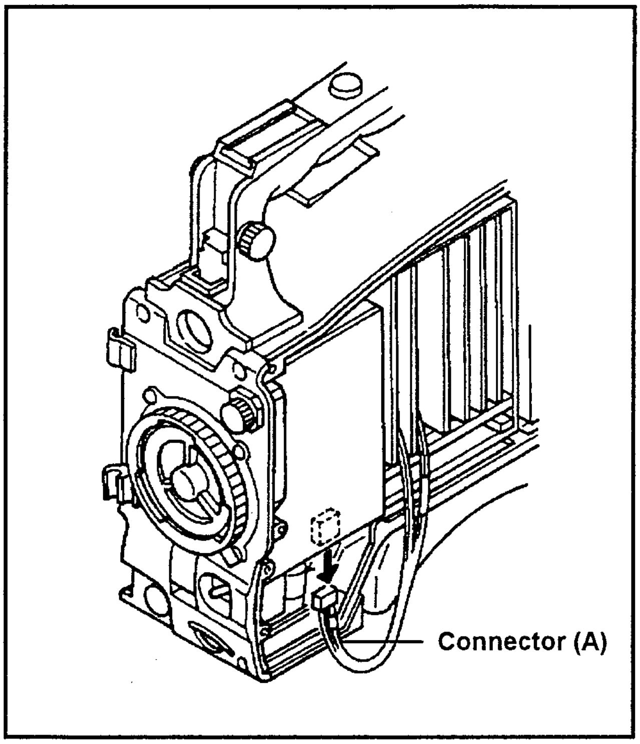
## 7-4. Removal of Cassette Up Unit

After removing the left side panel according to 2-2., loosen the 4 screws (A) and remove the panel.

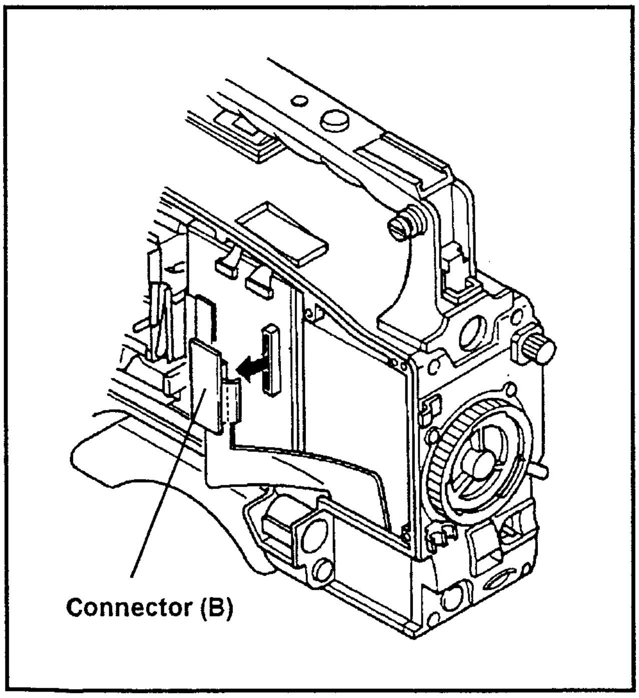


## 7-5. Removal of Camera Unit

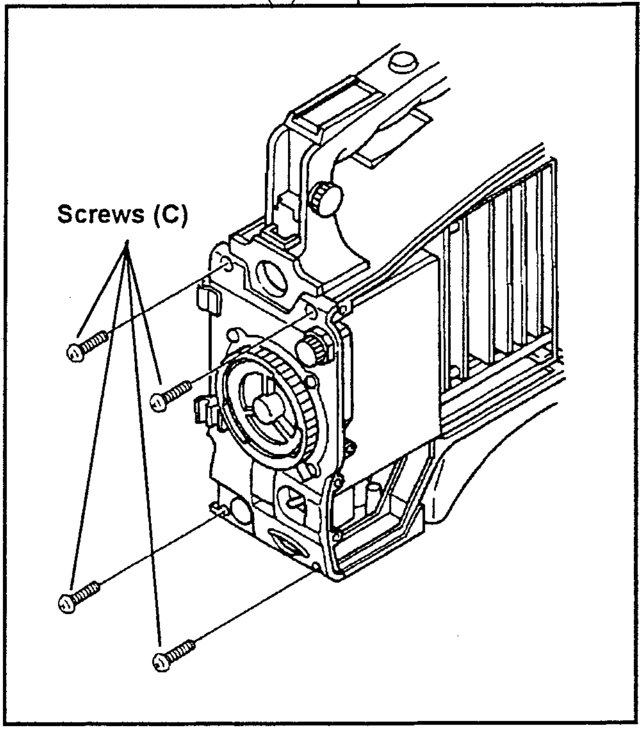
After removing the both panels according to 7-2. and 7-3., disconnect the connector (A).

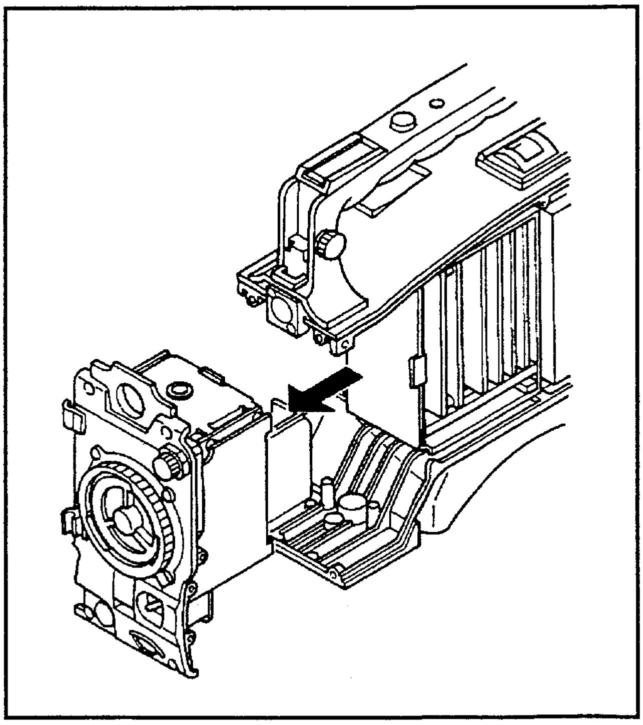

Connector (A)

Disconnect the connector (B).


Connector (B)

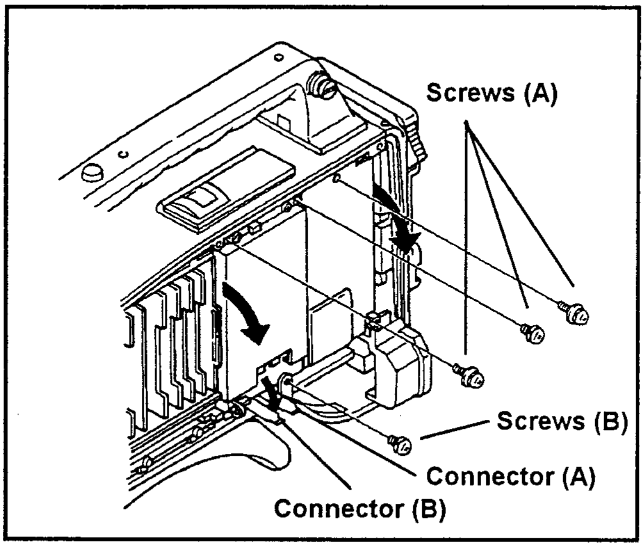
Remove the 4 screws (C) and pull out the camera unit.



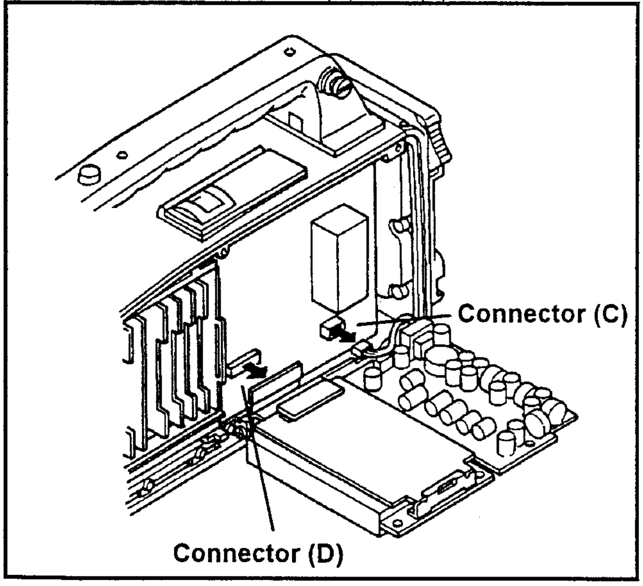


## 7-6. Removal of Mechanical Chassis Unit

After removing the right side panel according to 7-3., disconnect the connectors (A) and (B). Remove the 3 screws (A) and the screw (B) and lay down the boards.

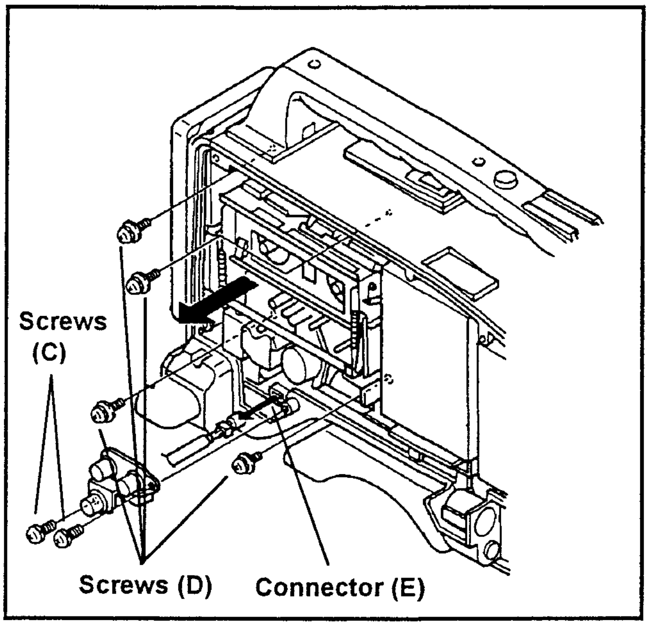

Screws (A)
Screws (B)
Connector (A)
Connector (B)

Disconnect the connectors (C) and (D).


Connector (C)
Connector (D)

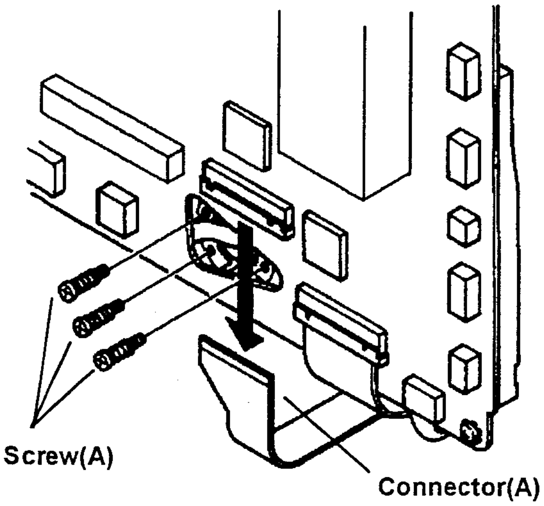
After removing the left side panel according to 7-2., remove the 2 screws (C) to disconnect the connector (E). Remove the 4 screws (D).

Remove the mechanical chassis with care not to scratch the connectors (A) and (B).

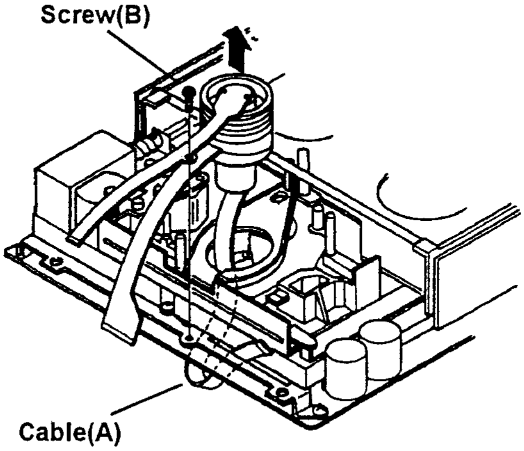

Screws (C)
Screws (D)
Connector (E)

## 7-7. Removal of Drum Unit

After removing the mechanical chassis according to 7-6., disconnect the connector (A) and the 3 screws (A).


Screw(A)
Connector(A)

Remove the screw (B) and the drum unit with care not to scratch the cable (A).


Screw(B)
Cable(A)

# 8. Mechanical Parts Replacement and Adjustment Procedures

## General

When mechanical parts are replaced, pay attention to the following notes.

1. Turn power off before replacing any part.
2. If any adjustment is required after replacing parts, perform the required adjustments.
3. Use proper fixture tools.
4. Make sure to clean the parts after replacement, Also when the mechanical parts are replaced, follow the replacement procedure.

## 8-1. Drum Unit Replacement

**(Removal)**

1. Remove the T1 Guide and Cleaning Arm Unit (Refer to item 8-8).
2. After removing the mechanical chassis according to item 7-6., disconnect the **connector (A)** and the **3 screws (A)**.

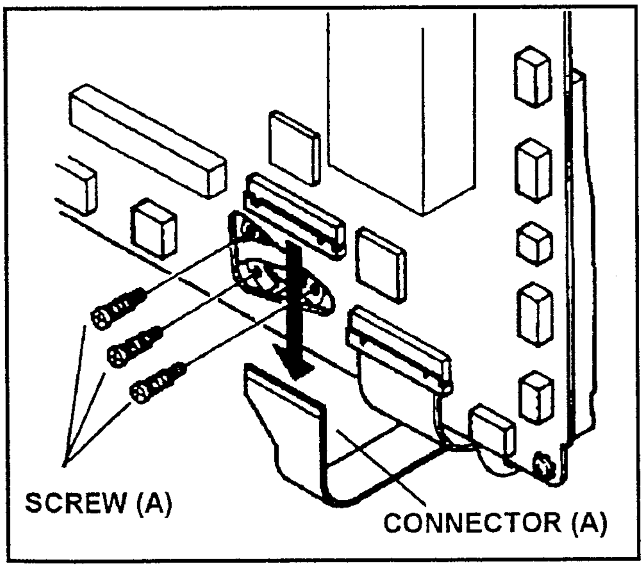


Fig. 8-1-1

Remove **the screw (B)** and the drum unit with care not to scratch **the cable (A)**.

**Note:** Be careful when removing the flexible cable from the connector. Refer to the way to remove the connector as shown in Figure 8-1-4.

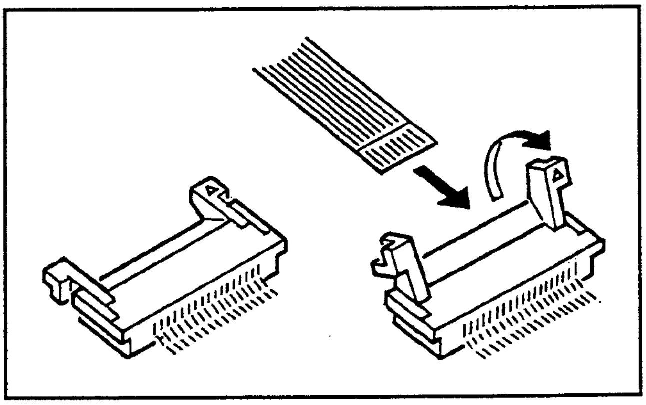


Fig. 8-1-4

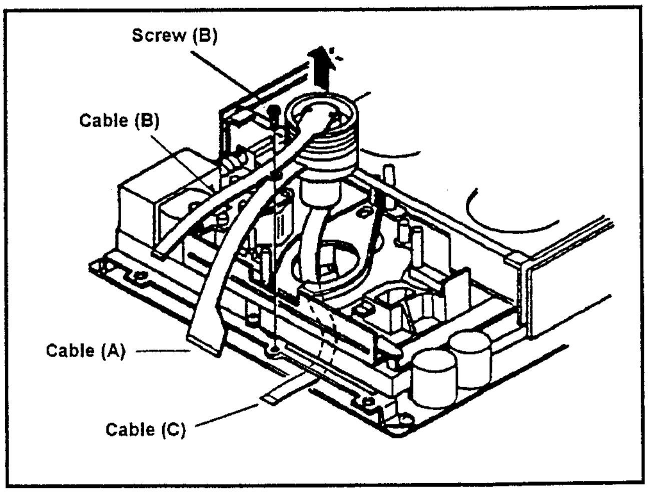


Fig. 8-1-2

**Note:** Never touch the cylinder with a finger directly when pulling out the Cylinder Unit.

**(Installation)**

1. Install the new Cylinder Unit according to the opposite procedures to removing.
2. After installing T1 Guide, T1 Guide position adjustment should be performed (Refer to item 8-8-1).

**Note:** When installing the Cylinder Unit, the pin on Mech. Chassis should match hole of Cylinder Unit as shown in Figure 8-1-3.

**Note:** Please put **the flexible** (B) and (C) between **copper shield plate** (D) and (E) as shown in Figure 8-1-5.

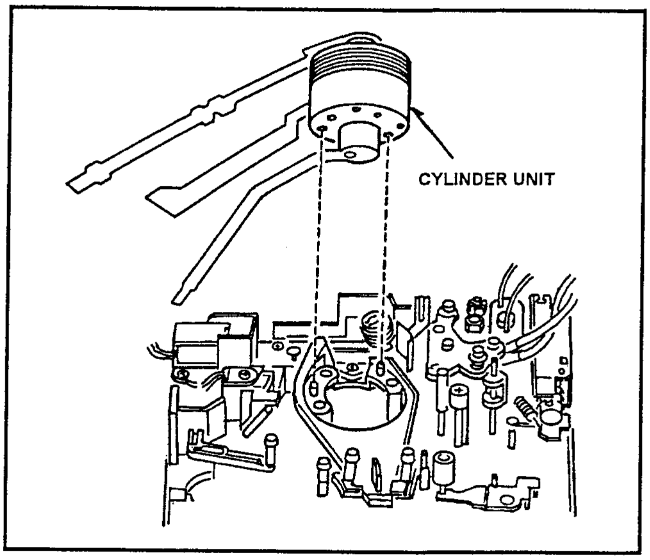

CYLINDER UNIT

Fig. 8-1-3

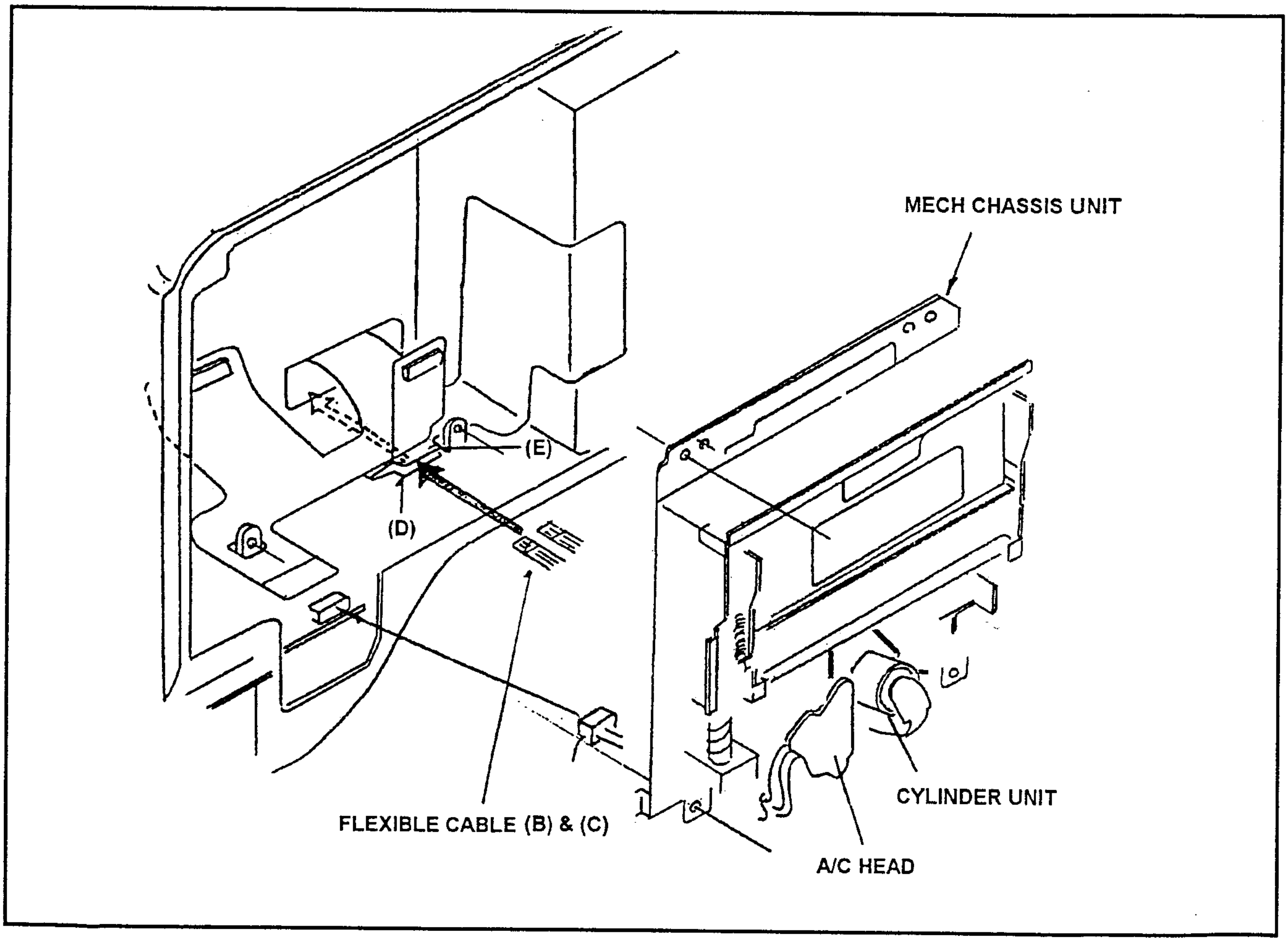

MECH CHASSIS UNIT
(E)
(D)
FLEXIBLE CABLE (B) & (C)
CYLINDER UNIT
A/C HEAD

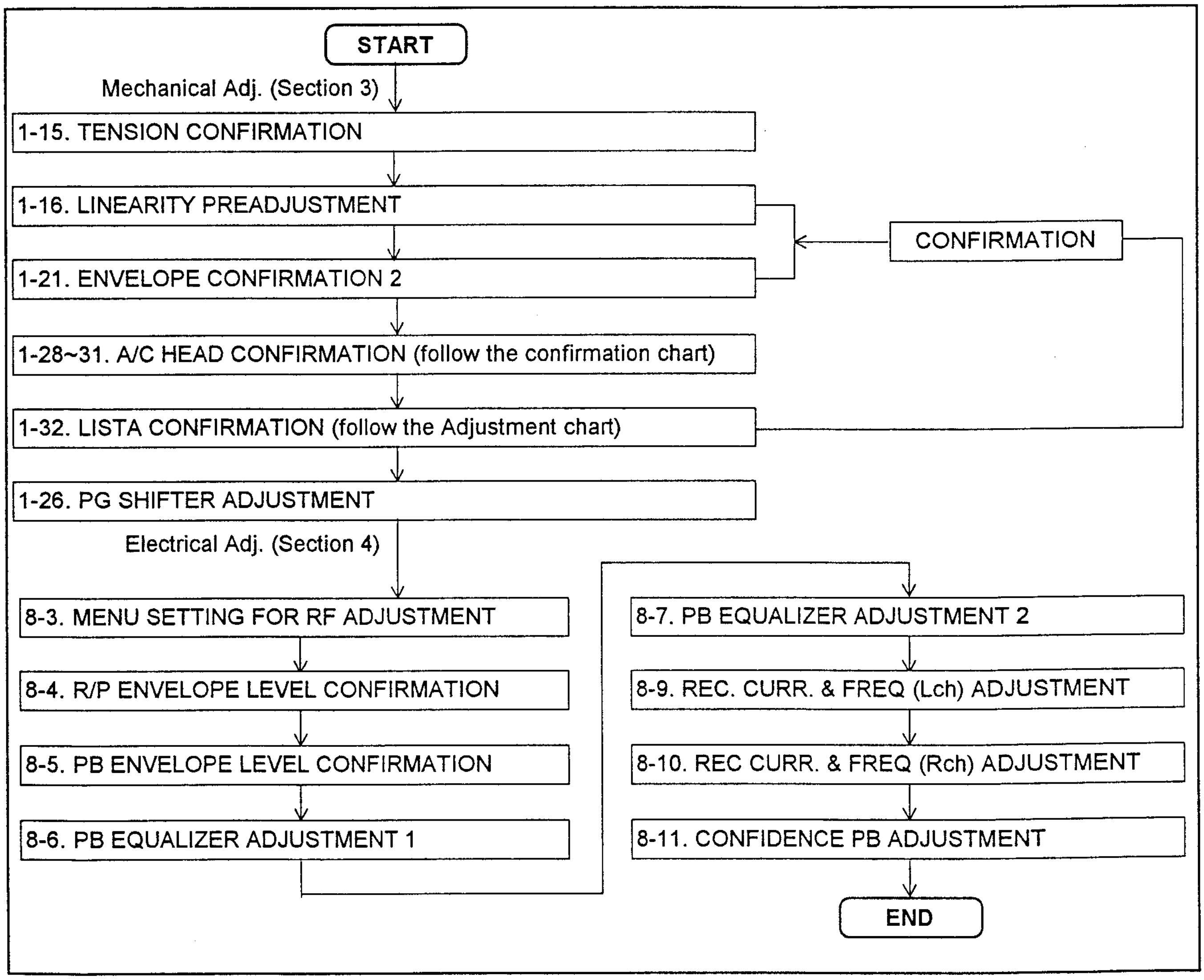
Fig. 8-1-5

### 8-1-1. Adjustment Flow Chart After Drum Unit Replacement

1. After changing the Drum Unit, perform the following steps.

### Adjustment Flowchart After Drum Unit & Mech. Chassis Replacement

**Note:** Confirm the tape path linearity before head replacement.
The number indicated on the chart below is item number on the Service Manual.


START
Mechanical Adj. (Section 3)
1-15. TENSION CONFIRMATION
1-16. LINEARITY PREADJUSTMENT
CONFIRMATION
1-21. ENVELOPE CONFIRMATION 2
1-28~31. A/C HEAD CONFIRMATION (follow the confirmation chart)
1-32. LISTA CONFIRMATION (follow the Adjustment chart)
1-26. PG SHIFTER ADJUSTMENT
Electrical Adj. (Section 4)
8-3. MENU SETTING FOR RF ADJUSTMENT
8-4. R/P ENVELOPE LEVEL CONFIRMATION
8-5. PB ENVELOPE LEVEL CONFIRMATION
8-6. PB EQUALIZER ADJUSTMENT 1
8-7. PB EQUALIZER ADJUSTMENT 2
8-9. REC. CURR. & FREQ (Lch) ADJUSTMENT
8-10. REC CURR. & FREQ (Rch) ADJUSTMENT
8-11. CONFIDENCE PB ADJUSTMENT
END

## 8-2. A/C Head Replacement

### 8-2-1. Replacement

※ Required tools:
Nut Driver (5.5m/m)(VFK1150)
Hex Driver (VFK1148)
Hex Wrench (VFK1190)

**(Removal)**

1. Remove the Cassette Cover and Left Side Panel..
2. Remove the Cassette Up Unit.
3. Loosen the **hex. screw (B)** and remove the **Nut (C)**. Pick up the Head Height Adjustment Spring and then remove the A/C Head Unit as shown in Figure 8-2-3.

**Point:** Memorize the height of Nut (C) before removing the **Nut (C)**,

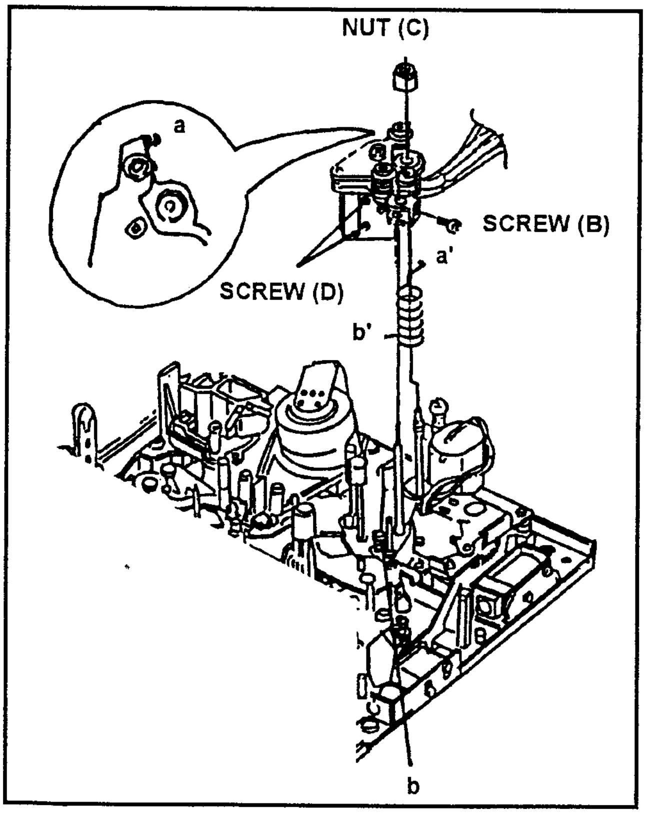


Fig. 8-2-3 Removal of A/C Head Unit

4. Remove the **2 screws (A).** Disconnect the **connector P1003** on the **Rear Jack** P.C.Board and **P600** on the **Servo** P.C.Board, and then remove the A/C Head from the A/C Head Plate.

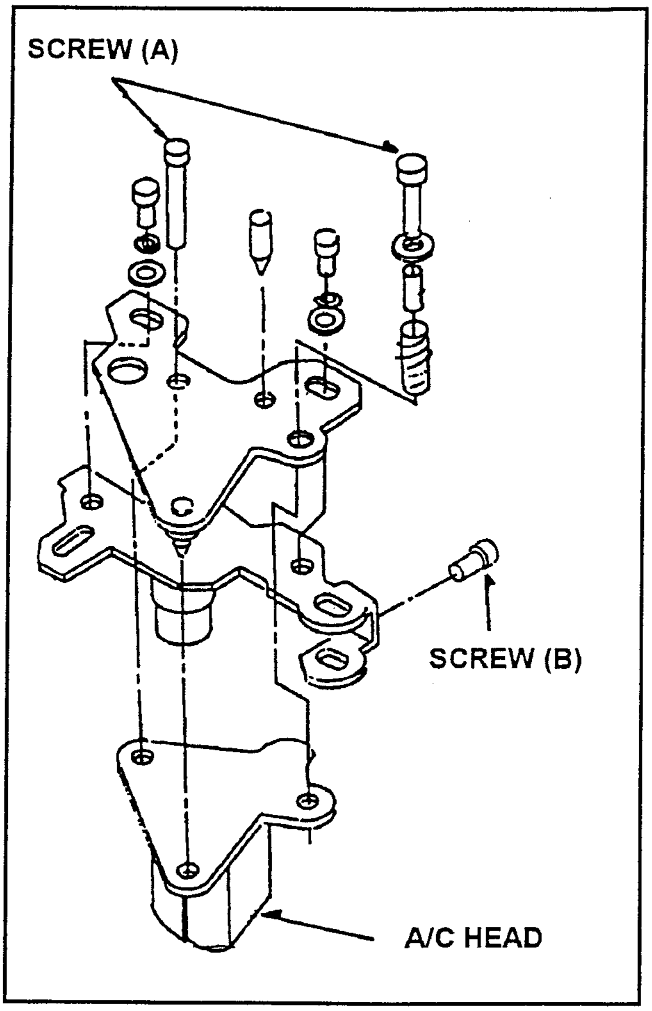


Fig. 8-2-1 Removal of A/C Head

5. Remove **2 screws (D)** to remove the Shield Cover as shown in Figure 8-2-3.
6. Unsolder the lead wires one by one. (Don't unsolder all wires at the same time.)

**(Installation)**

1. Remove the Shield Case from the New A/C Head and solder the lead wires to New A/C Head (Refer to Figure 8-2-2).
2. Re-install the shield case to A/C Head.
3. Install the A/C Head to A/C Head Plate and tighten **2 screws (A)** so that A/C Head is parallel to A/C Head Plate.
4. Install the A/C Head Unit.
5. Put on the Head Height Adjustment Spring and tighten **the Nut (C).**
6. Clean the surface of the A/C Head.

**Note:** After installing, Mechanical and Electrical Adjustments should be performed.
The **hex screw (B)** is kept loose until the A/C Head Height Adjustment is completed.

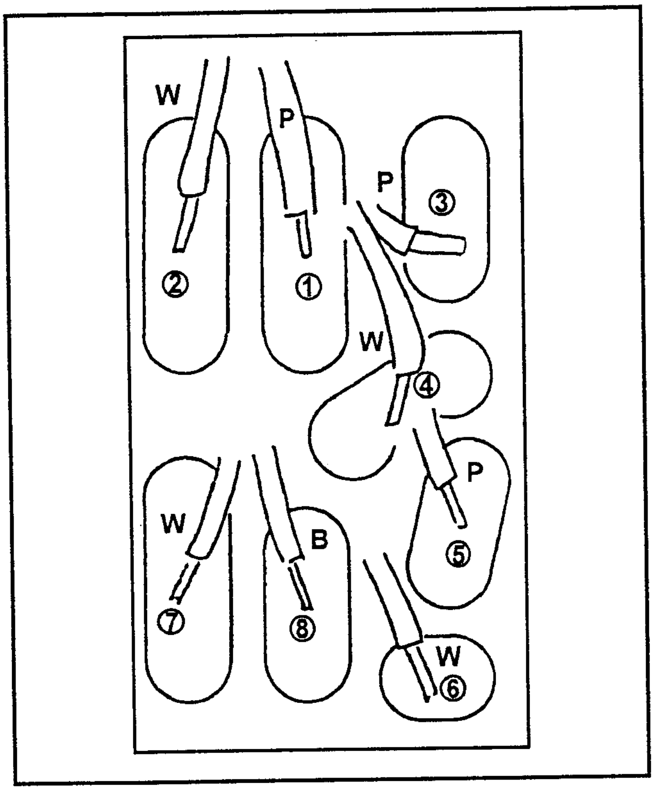
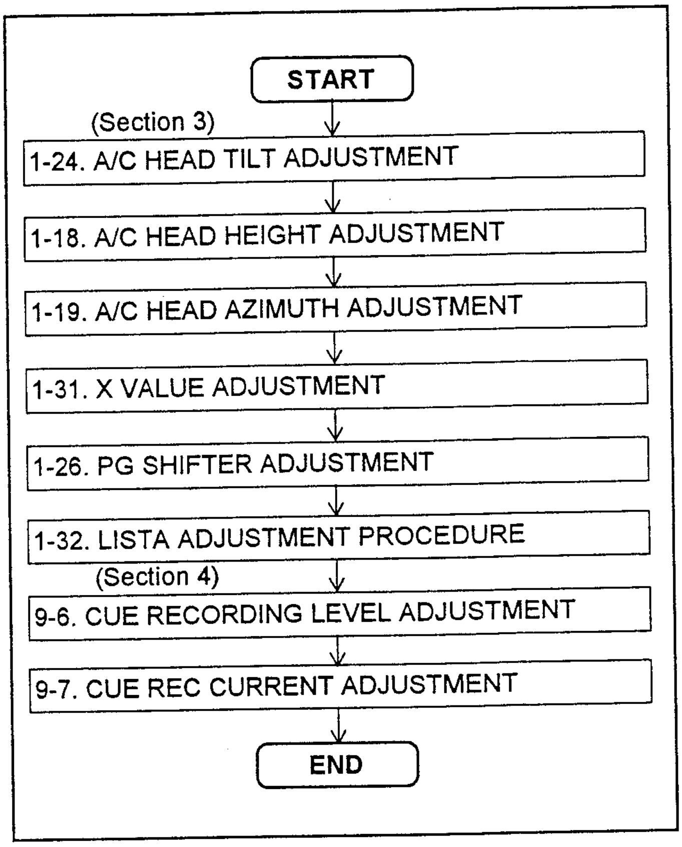

W
P
P
③
②
①
W
④
P
W
B
⑤
⑦
⑧
W
⑥

Fig. 8-2-2 Connection of A/C Head

| A/C Head Side | Cable Color | | Connector No. |
|---|---|---|---|
| 1 | PINK | YELLOW | P1003 |
| 2 | WHITE | | |
| 3 | PINK | RED | |
| 4 | WHITE | | |
| 5 | PINK | GREEN | |
| 6 | WHITE | | |
| 7 | WHITE | YELLOW | P600 |
| 8 | BLACK | | |

## 8-2-2. Adjustment Flowchart After A/C Head Replacement

1. After replacing the A/C Head, perform the following steps.


START
(Section 3)
1-24. A/C HEAD TILT ADJUSTMENT
1-18. A/C HEAD HEIGHT ADJUSTMENT
1-19. A/C HEAD AZIMUTH ADJUSTMENT
1-31. X VALUE ADJUSTMENT
1-26. PG SHIFTER ADJUSTMENT
1-32. LISTA ADJUSTMENT PROCEDURE
(Section 4)
9-6. CUE RECORDING LEVEL ADJUSTMENT
9-7. CUE REC CURRENT ADJUSTMENT
END

## 8-3. Reel Table Replacement

**(Removal)**

1. Remove the Cassette Cover and Left Side Panel.
2. Remove the Cassette Up Unit.
3. Press the iron core of Brake Solenoid to release the Reel Brake.
4. Pull up gently the Supply and Take up Reel Tables.

**Note:** Handling roughly damages bearings inside Reel Tables.

**(Installation)**

1. Install the Reel Tables according to the opposite procedures to removing.
2. After Installing, Main Brake Torque Confirmation (Refer to item 1-4 of Section 3) should be performed.

### 8-3-1. Supply Reel Rotor Unit Replacement

**(Removal)**

1. Remove Cassette Cover and Left Side Panel.
2. Remove the Cassette Up Unit.
3. Remove the connector P614 on the Servo P.C.board.
4. Remove the S5 Post (Refer to item 8-14).
5. Pull up the Arm Return Spring on the Connection Arm Angle Side.
6. Remove the Connection Arm Angle.
7. Remove the **Cut Washer (A)** and **(B)** to remove the Idler Arm Unit as shown in Figure 8-3-2.
8. Unscrew the **4 screws (C)** to remove the Supply Reel Rotor Unit as shown in Figure 8-3-2.
9. Unscrew the **2 screws (D)** to remove the S-Side M Stopper from Supply Reel Rotor Unit as shown in Figure 8-3-3.

**CAUTION:** Don't touch FG portion with the magnetized screw driver , when unscrewing the **screw (D)**.

**(Installation)**

1. Install the new Supply Reel Rotor Unit according to the opposite procedures to removing.
2. Adjust the height of cassette height pin.
3. Adjust the Reel Torque Offset (Refer to item 7-1 of Section 3).
4. Confirm the tape tension on playback mode. (Refer to item 1-15.)

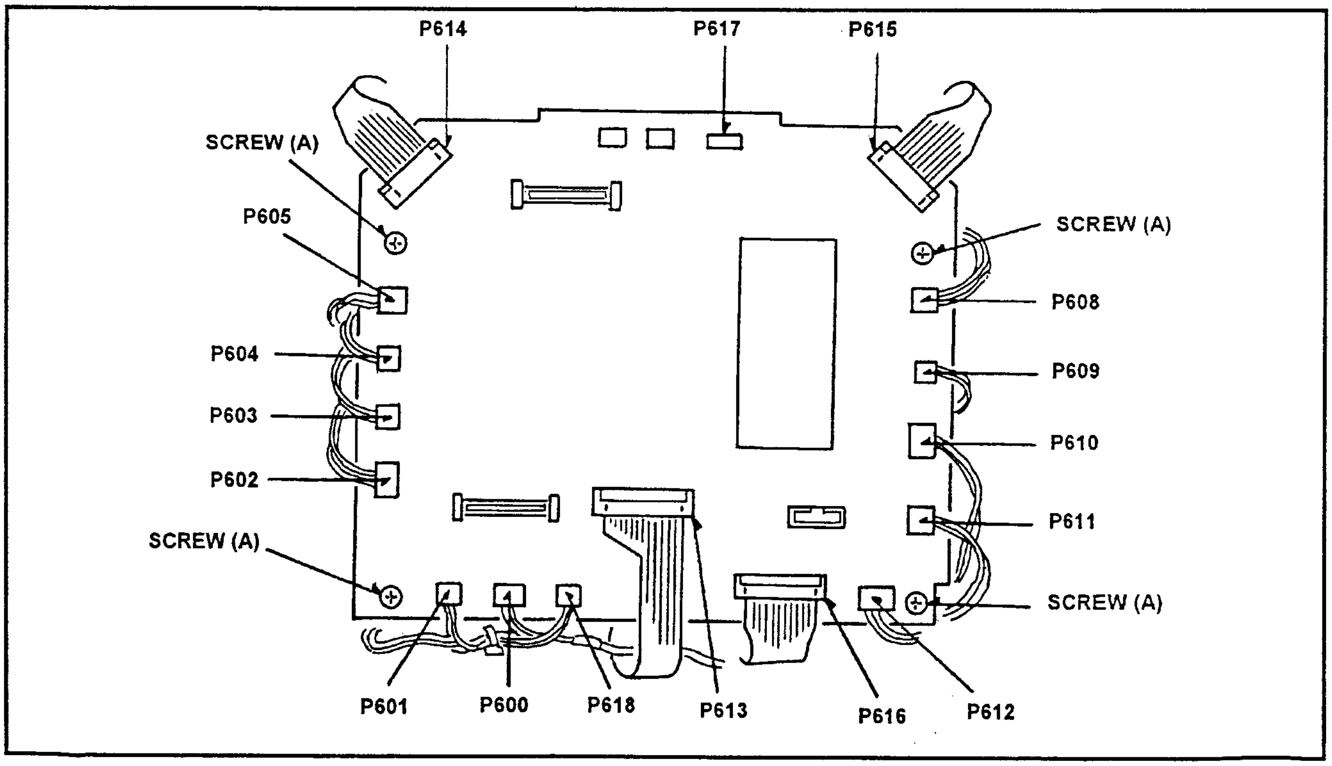


Fig. 8-3-1 Connection of Servo P.C.Board

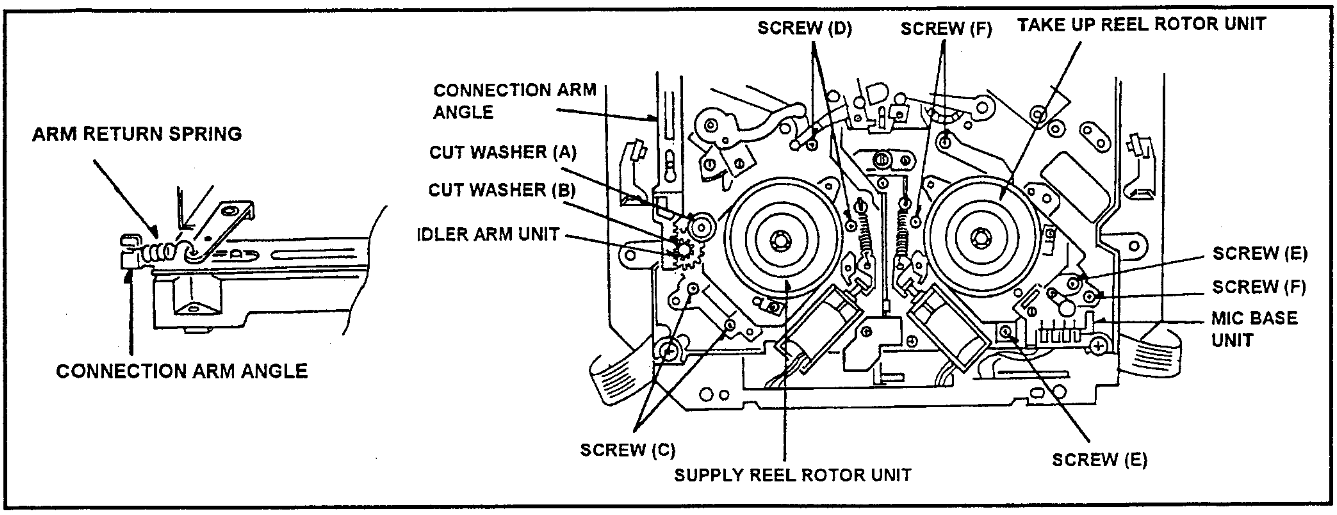

SCREW (D)
SCREW (F)
TAKE UP REEL ROTOR UNIT
CONNECTION ARM ANGLE
ARM RETURN SPRING
CUT WASHER (A)
CUT WASHER (B)
IDLER ARM UNIT
SCREW (E)
SCREW (F)
MIC BASE UNIT
CONNECTION ARM ANGLE
SCREW (C)
SUPPLY REEL ROTOR UNIT
SCREW (E)

Fig. 8-3-2 Removal of Supply & Take Reel Rotor Unit

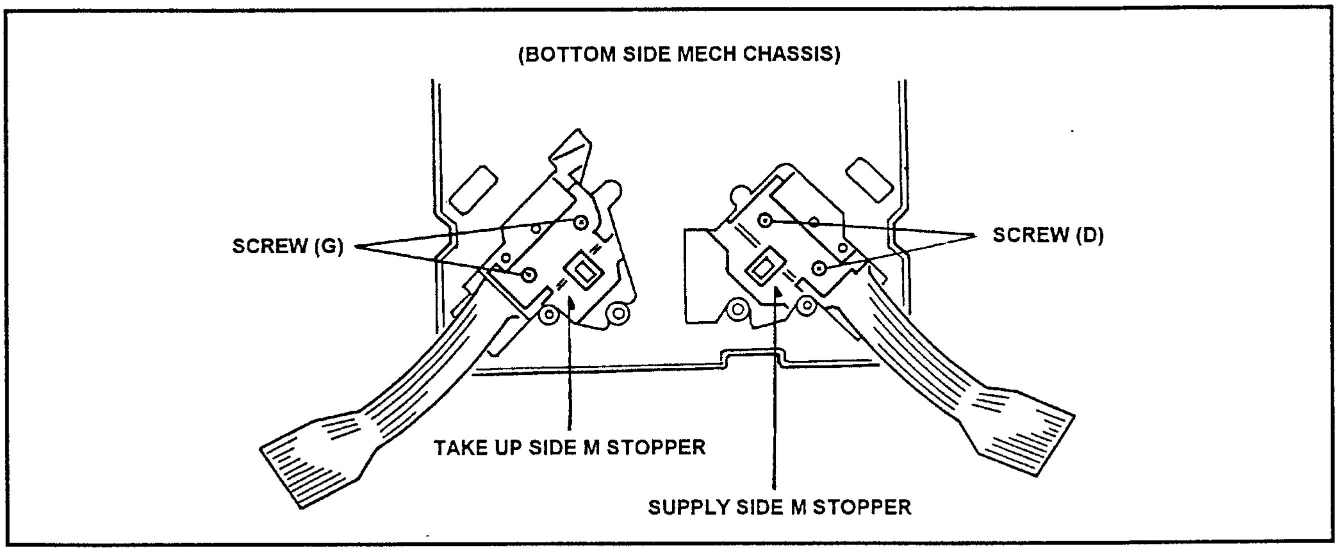

(BOTTOM SIDE MECH CHASSIS)
SCREW (G)
SCREW (D)
TAKE UP SIDE M STOPPER
SUPPLY SIDE M STOPPER

Fig. 8-3-3 Removal of Supply & Take Reel Rotor Unit

## 8-3-2. Take Up Reel Rotor Unit Replacement

1. Remove the Cassette Cover and Left Side Panel.
2. Remove the Cassette Up Unit.
3. Remove the Mechanical Chassis Unit (Refer to item 7-6).
4. Disconnect the **connector P615** on the **Servo** P.C.Board and unscrews **the 2 screws (E)** ,and then remove the MIC Base Unit.
5. Unscrew the **3 screws (F)** to remove the Take Up Reel Rotor Unit as shown in Figure 8-3-2.

**CAUTION:** Don't touch FG portion with the magnetized screw driver when unscrewing the **screw (D).**

6. Unscrew the **2 screws (G)** to remove the T-Side M Stopper from Take Up Reel Rotor Unit as shown in Figure 8-3-3.

**(Installation)**

1. Install the new Take Up Reel Rotor Unit according to the opposite procedures to removing.
2. Adjust the height of cassette height pin.
3. Adjust the Reel Torque Offset (Refer to item 7-1 of Section 3).
4. Confirm the tape tension on playback mode (Refer to item 1-15).

## 8-4. Loading Motor Unit Replacement

**(Removal)**

1. Remove the Cassette Cover and Left Side Panel..
2. Remove the Cassette Up Unit.
3. Disconnect the **connector P611** on **Servo** P.C.Board as shown in Figure 8-3-1.
4. Remove the Pinch Solenoid Unit (Refer to item 8-9).
5. Remove the Pinch Solenoid Lever. (Refer to item 8-5).
6. Unscrew **the screw (B)** to remove the Emergency Shaft as shown in Figure 8-4-1.
7. Unscrew the **2 screws (C)** to remove the Loading Motor Neutral Unit as shown in Figure 8-4-1.
8. Unscrew the **2 screws (D)** to remove the Loading Motor Unit as shown in Figure 8-4-1.

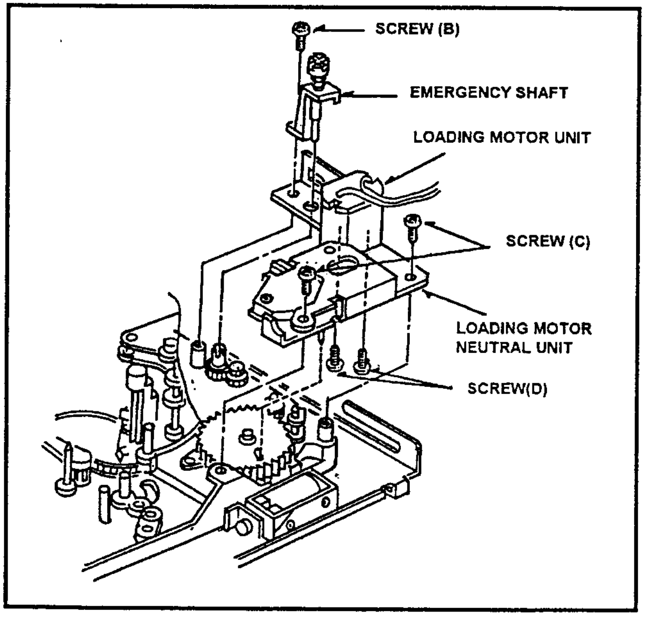


Fig. 8-4-1 Removal of Loading Motor Unit

**(Installation)**

1. Install the new Loading Motor Unit to Loading Motor Neutral Unit and tighten **2 screws (D)**.
2. Install the Loading Motor Neutral Unit and tighten the **2 screws (C)** so that the pin of Mode SW Unit matches groove position of main Cam Gear.
3. Install the Emergency Shaft and tighten **the screw (B)**.
4. Install the Pinch Solenoid Unit. After installing, Pinch Solenoid Position adjustment is required. (Refer to item 1-3 of Section 3).

## 8-5. Pinch Arm Unit Replacement

**(Removal)**

1. Remove the Cassette Cover and Left Side Panel.
2. Remove the Cassette Up Unit.
3. Disconnect the **connector P610** on the **Servo** P.C.Board as shown in Figure 8-3-1.
4. Remove the Pinch Solenoid Unit (Refer to item 8-9, and pull up the Pinch Solenoid Lever as shown in Figure 8-5-1.
5. Remove the **cut washer (A)** to remove the Pinch Solenoid Lever as shown in Figure 8-5-1.
6. Remove the **cut washer (B)** to remove the Pinch Arm Unit as shown in Figure 8-5-1.

**(Installation)**

1. Install the new Pinch Arm Unit according to the opposite procedures to removing. Pinch Solenoid Position Adjustment is required. (Refer to item 1-3 of Section 3.)

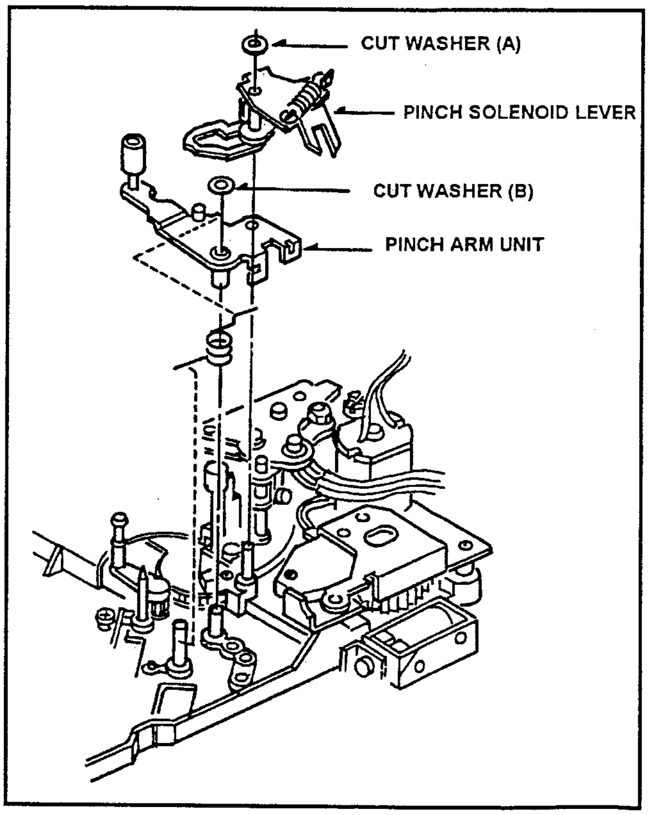


Fig. 8-5-1 Removal of Pinch Arm Unit

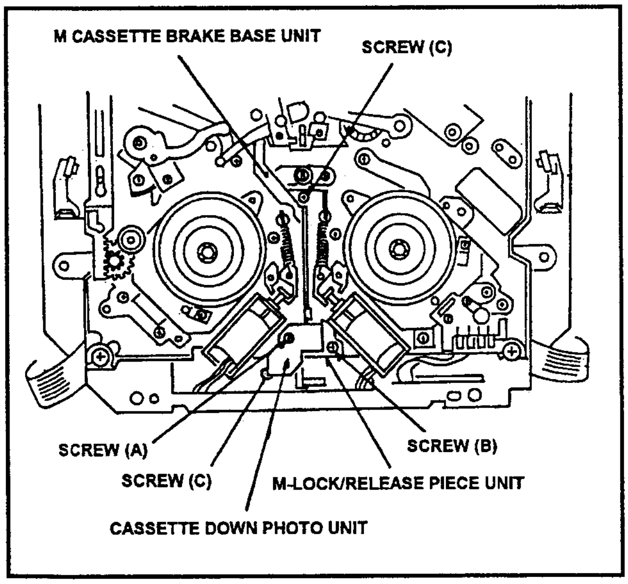
## 8-6. M Cassette Brake Base Unit Replacement

**(Removal)**

1. Remove the Cassette Cover and Remove the Left Side Panel.
2. Remove the Cassete Up Unit.
3. Remove the Mech Chassis Unit (Refer to item 7-6).
4. Disconnect the **all connectors** on **Servo** P.C.Board. Unscrew the **4 screws (A)** to remove the Servo P.C.Board as shown in Figure 8-3-1.
5. Unscrew the **screw (A)** to remove the Cassette Down Photo Unit.
6. Unscrew the **screw (B)** to remove the M-Lock/Release Piece Unit.
7. Unscrew the **2 screws (C)** to remove the M cassette Blake Base Unit. Then pick up the pin of Eject Arm Unit.

**(Installation)**

1. Install the new cassette Brake Base Unit according to the opposite procedures to removing.


M CASSETTE BRAKE BASE UNIT
SCREW (C)
SCREW (A)
SCREW (B)
SCREW (C)
M-LOCK/RELEASE PIECE UNIT
CASSETTE DOWN PHOTO UNIT

## 8-7. Mode Select Switch Unit Replacement

**(Removal)**

1. Remove the Cassette Cover and Left Side Panel.
2. Remove the Cassette Up Unit.
3. Disconnect the **connector P612** on the **Servo** P.C.Board as shown as Figure 8-3-1.
4. Remove the Pinch Solenoid Unit and Loading Motor Neutral Unit (Refer to item 8-4).
5. Remove the **screw (D)** to remove the Mode Select Switch Unit from Loading Motor Neutral Unit as shown in Figure 8-7-1.

**(Installation)**

1. Install the New Mode Select Switch Unit according to the opposite procedures to removing. (Please refer to item. [8-4. Loading Motor Unit Replacement.])

**Note:** Confirm that the pin of Mode Switch Unit matches groove of Main Cam Gear.

2. After installing the Pinch Solenoid Unit, Pinch Solenoid Position adjustment is required (Refer to item 1-3 of Section 3).

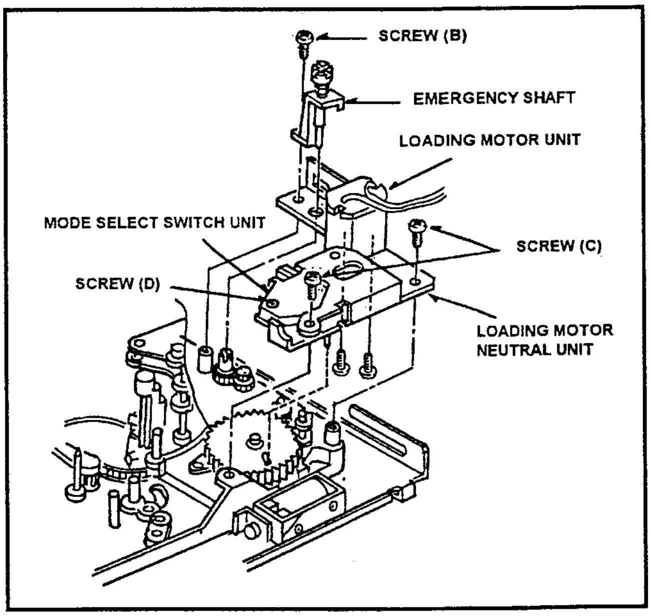

SCREW (B)
EMERGENCY SHAFT
LOADING MOTOR UNIT
MODE SELECT SWITCH UNIT
SCREW (C)
SCREW (D)
LOADING MOTOR NEUTRAL UNIT

Fig. 8-7-1 Removal of Mode Select Switch Unit

## 8-8. Cleaning Arm Unit Replacement

**(Removal)**

1. Remove the Cassette Cover and Left Side Panel.
2. Unscrew the **2 screws (C)** to remove the BNC JACK P.C.Board as shown in Figure 8-8-3.
3. Unscrew the **2 screws (A)** to remove the T1 Guide.
4. Pick up **the tip portion (B)** of Cleaning Arm Unit and remove the spring from Cleaner Arm Unit. Then remove the Cleaning Arm Unit as shown in Figure 8-8-1.

**(Installation)**

1. Install the cleaning Arm Unit, then hang the spring on Cleaning Arm Unit.
2. Install the T1 Guide and tighten **2 screws (A)**.
3. Press the iron core of the Cleaner Solenoid and confirm that the Cleaner Roller is rotated when the cylinder is rotated by hand.
4. T1 Guide position adjustment should be performed.

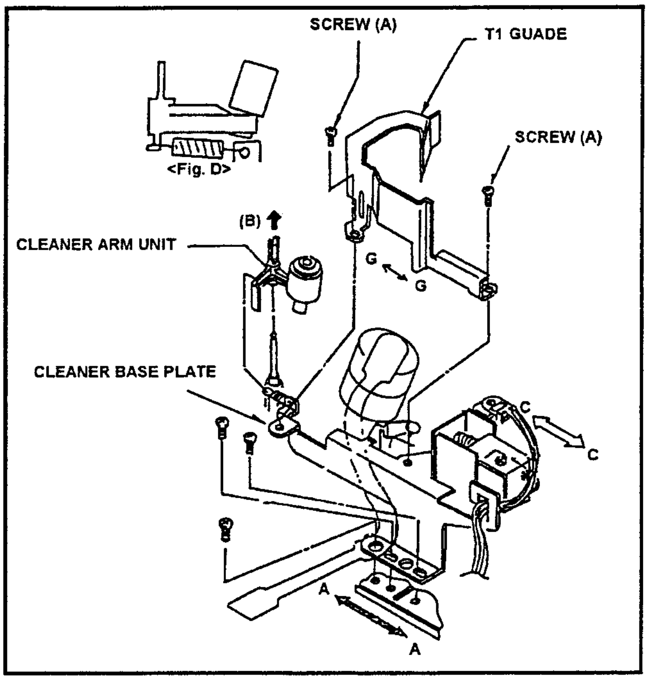


Fig. 8-8-1 Removal of Cleaner Roller Unit

### 8-8-1. T1 Guide Position Adjustment

Place the unit in Loading completion mode.

**< How to Make the No Tape Loading >**

- Set a black tube to TAPE LED sensor.
- Turn on the power and then the VTR begins loading without tape. And turn power to off.

1. Observe the **clearance (B)** between T1 Guide and T1 post as shown in Figure 6-8-3. And make sure that it is within **0.2 to 0.5mm**.
2. If not, loosen the **2 screws (A)** and adjust the position of T1 Guide by moving to arrow direction (G ⇔ G) so that the **clearance (B)** is within specification. And tighten the **2 screws (A)**.

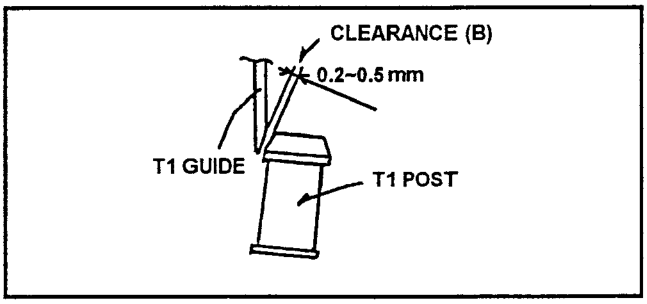


Fig. 8-8-2 Adjustment of T1 Guide

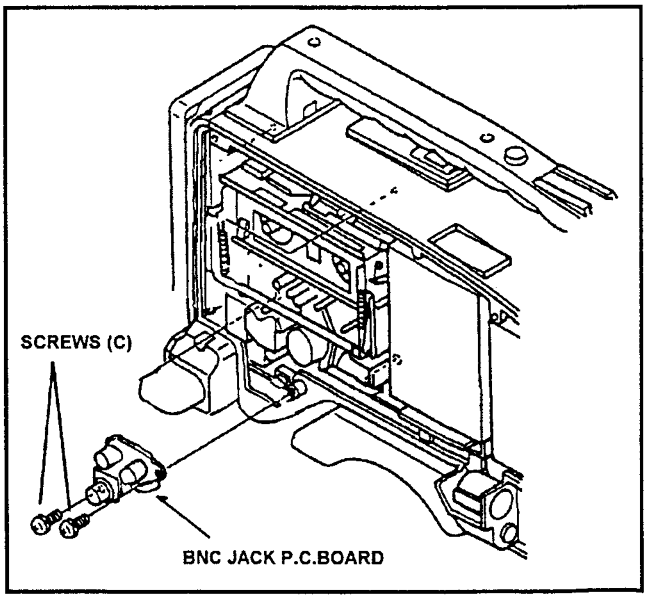


Fig. 8-8-3 Removal of BNC JACK P.C.Board

## 8-9. Pinch Solenoid Replacement

**(Removal)**

1. Remove the Cassette Cover and Left Side Panel.
2. Remove the Cassette Up Unit.
3. Disconnect the **connector P610** on the **Servo** P.C.Board as shown in Figure 8-3-1.
4. Unscrew the **2 screws (A)** and remove the Pinch Solenoid Unit as shown in Figure 8-9-1.
5. Unscrew the **2 screws (B)** and remove the Pinch Solenoid Angle as shown in Figure 8-9-1.
6. Unscrew the **2 screw s (C)** and remove the Pinch Solenoid from the Pinch Solenoid Base.

**(Installation)**

1. Install the new Pinch Solenoid according to the opposite procedures to removing.
2. After installing, Pinch Solenoid Position Adjustment is required. (Refer to item 1-3 of Section 3.)

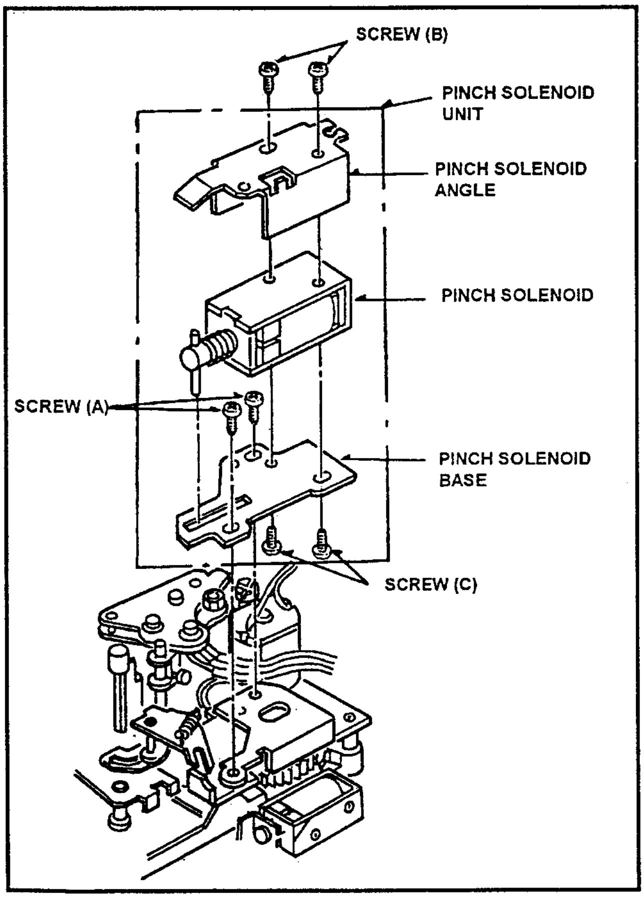

SCREW (B)
PINCH SOLENOID UNIT
PINCH SOLENOID ANGLE
PINCH SOLENOID
SCREW (A)
PINCH SOLENOID BASE
SCREW (C)

Fig. 8-9-1. Removal of Pinch Solenoid

## 8-10. MIC Base Unit Replacement

**(Removal)**

1. Remove the Cassette Cover and Left Side Panel.
2. Remove the Cassette Up Unit.
3. Disconnect the **connector P607** on **Servo** P.C.Board.
4. Unscrew the **2 screws (A)** and remove the MIC Base Unit as shown in Figure 8-10-1.

**(Installation)**

1. Install the new MIC Base Unit according to the opposite procedures to removing.
2. Confirm that the M cassette touches to MIC Base Unit properly.

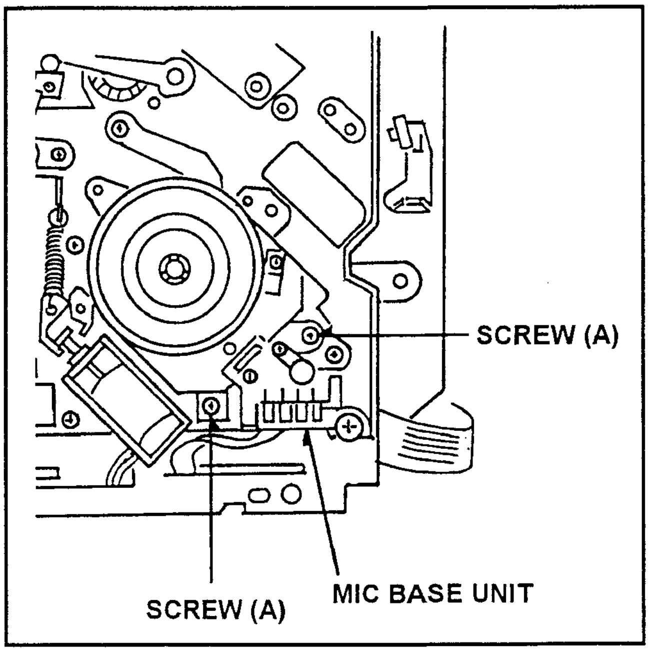

SCREW (A)
SCREW (A)
MIC BASE UNIT

Fig. 6-10-1 Removal of MIC Base Unit

## 8-11. S1 Post Loading Arm Unit Replacement and Adjustment

**(Removal)**

1. Remove the Cassette Cover and Left Side Panel.
2. Remove the Cassette up Unit.
3. Remove the S5 Post Base Unit (Refer to item 8-14).
4. Remove the Tension Arm Unit (Refer to item 8-15).
5. Unscrew the **screw (A)** and remove the S1 Post from Loading Rail as shown in Figure 8-11-1.
6. Remove the **Cut Washer (B)** and remove the S1 Loading Arm Unit as shown in Figure 8-11-1.

**(Installation)**

1. Install the new S1 Loading Arm Unit according to the opposite procedures to removing. Then S1 Post Loading Arm Unit Phase Adjustment should be performed as shown below.
2. After installing, confirm that the S1 Post moves smoothly on the Loading Rail.
3. Tension Arm (Refer to item 1-7 of section 3), Post Height Pre-Adjustment (Refer to item 1-5 of section 3) and Linearity Adjustment (Refer to item 1-13 of section 3 [ Tape Path Adjustment Procedure]) should be performed.

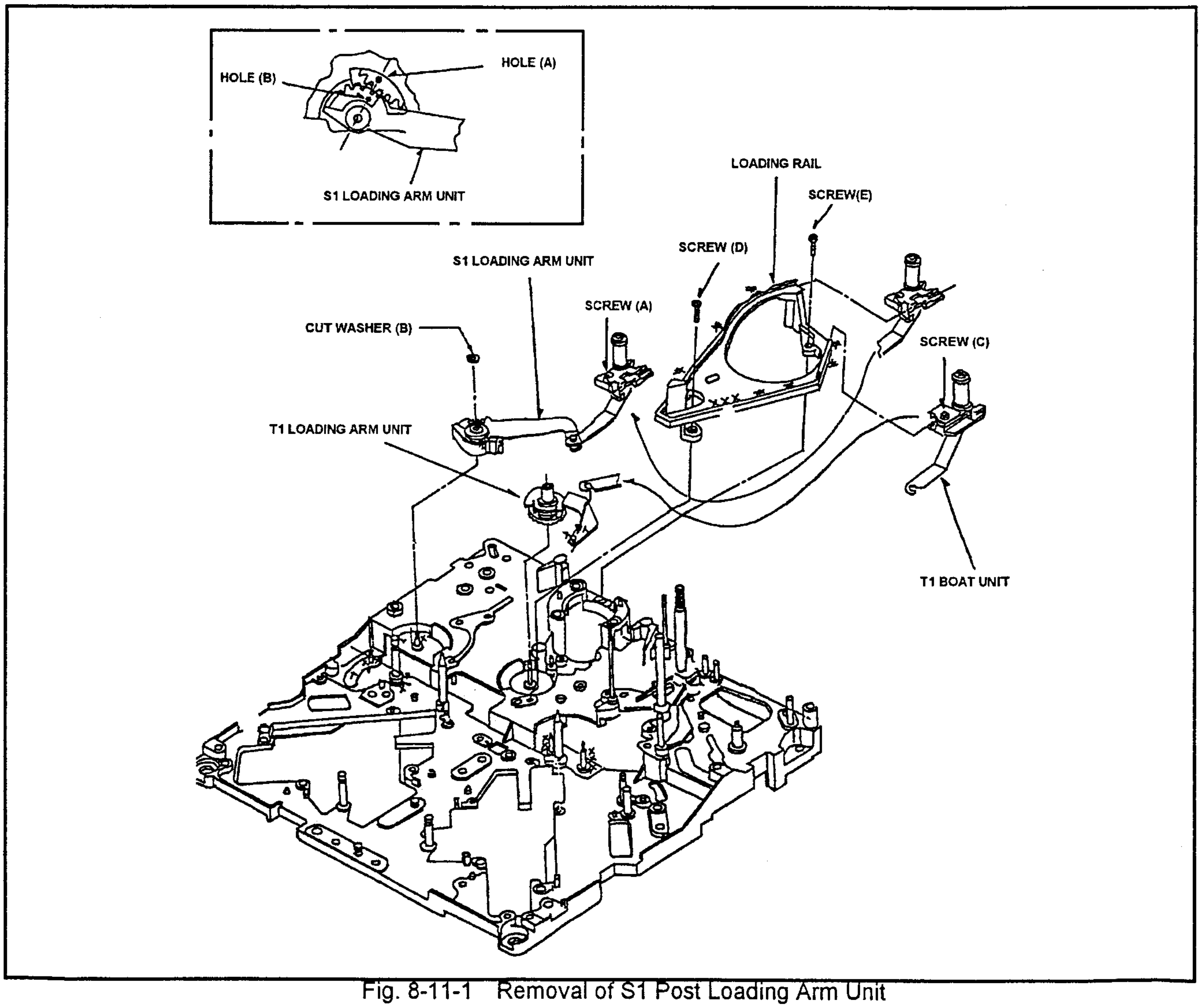

HOLE (B)
HOLE (A)
S1 LOADING ARM UNIT
LOADING RAIL
SCREW(E)
SCREW (D)
S1 LOADING ARM UNIT
SCREW (A)
CUT WASHER (B)
SCREW (C)
T1 LOADING ARM UNIT
T1 BOAT UNIT

Fig. 8-11-1 Removal of S1 Post Loading Arm Unit

**(Adjustment)**

1. Adjust S1 Post Loading Arm Unit so that **the hole (A)** should match **hole (B)** as shown in Figure 8-11-1.

## 8-12. T1 Boat Unit Replacement

**(Removal)**

1. Remove the Cassette Cover and Left Side Panel.
2. Remove the Cassette Up Unit.
3. Unscrew the **screws (C)**, and remove the T1 Post from Loading Rail as shown in Figure 8-11-1.
4. Remove the T1 Boat Unit from T1 Loading Arm Unit as shown in Figure 8-11-1.

**(Installation)**

1. Install the new T1 Boat Unit according to the opposite procedures to removing.
2. After installing, confirm that the T1 Post moves smoothly on the Loading Rail.
3. Linearity adjustment (Refer to item 1-13 of section 3 [ Tape Path Adjustment Procedure ]) should be performed.

### 8-12-1. T1 Loading Arm Unit Replacement and Adustment

**(Removal)**

1. Remove the Cassette Cover and Left Side Panel.
2. Remove the Cassette Up Unit.
3. Remove the cylinder Unit (Refer to item 8-1).
4. Move the T1 Post to loading direction until the **screw (D)** can be removed as shown in Figure 8-11-1.
5. Unscrew the **2 screws (A)** and **(C)**, and then remove the S1 and T1 Post from Loading Rail as shown in Figure 8-11-1.
6. Unscrew the **2 screws (D)** and **(E)**, and then remove the Loading Rail as shown in Figure 8-11-1.
7. Remove the T1 Loading Arm Unit as shown in Figure 8-11-1.

**(Installation)**

1. Install the T1 Loading Arm Unit according to the opposite procedures to removing. Then Phase Adjustment should be performed as follows.

**Note:** This unit should be replaced simultaneously with Cylinder Unit. It makes Replacement of T1 Loading Arm Unitconvenience easier.

**(Adjustment)**

1. When installing the T1 Boat Unit, **the hole (A)** should match **hole (B)** as shown in Figure 6-14-1.
2. After installing, confirm that the S1 and T1 Post move smoothly on the Loading Rail.
3. Post Height Pre-adjustment (Refer to item 1-5 of section 3) and Linearity Adjustment (Refer to item 1-13 of section 3 [ Tape Path Adjustment Procedure ]) should be performed.

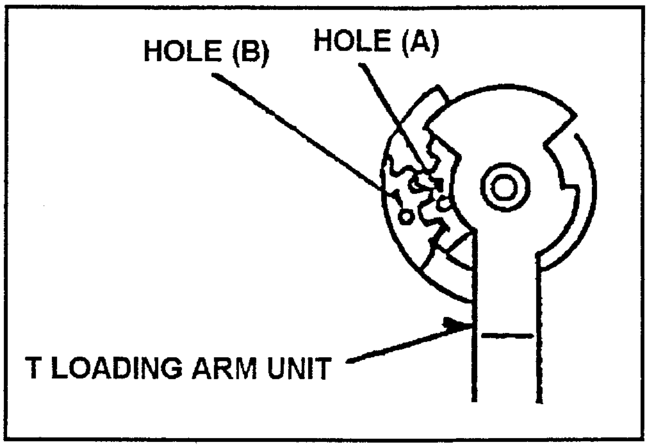


Fig. 8-12-1 Phase Adjustment of T1 Loading Arm Unit

## 8-13. Cleaner Solenoid Replacement and Adjustment

**(Removal)**

1. Remove the Cassette Cover and Left Side Panel.
2. Remove the Cassette Up Unit.
3. Disconnect the **connector P618** on the **Servo** P.C.Board.
4. Unscrew the **2 screws (A)** and remove the Cleaner Solenoid Unit as shown in Figure 8-13-1.
5. Unscrew the **2 screws (B)** and remove the Cleaner Solenoid as shown in Figure 6-15-1.

**(Installation)**

1. Install the new Cleaner Solenoid according to the opposite procedures to removing.
2. After installing, Cleaner Solenoid Position adjustment should be performed as follows.

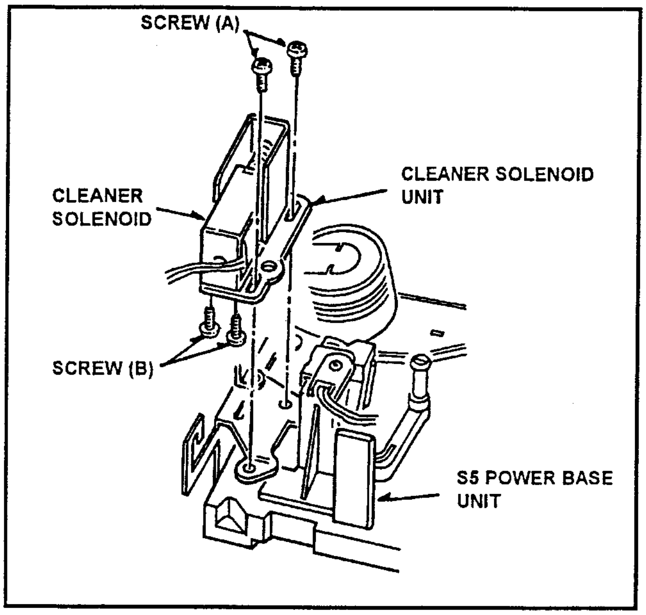

SCREW (A)
CLEANER SOLENOID UNIT
CLEANER SOLENOID
SCREW (B)
S5 POWER BASE UNIT

Fig. 8-13-1 Removal of Cleaner Solenoid

## 8-13-1. Cleaner Solenoid Position Adjustment

※ Required Tools : Eccentric Driver (VFK0357)

1. Press the iron core of Cleaner Solenoid.
2. Observe the **clearance (D)** between Cleaning Arm Unit and Cleaner Base Plate as shown in Figure 8-13-2. And make sure that it is **within 0.5 to 0.7mm.**
3. If not, loosen the **2 screws (A)** and adjust the position of Cleaner Solenoid Unit by moving to arrow direction (C⇔C) with eccentric driver so that the **clearance (D)** is within specification. And tighten the **2 screws (A).**
4. After adjustment, confirm as follows.
5. Press the iron core of Cleaner Solenoid to release, and then return the Cleaning Roller to original position.
6. Press the iron core of the Cleaner Solenoid and confirm that the Cleaner Roller is rotated when the cylinder is rotated by hand.

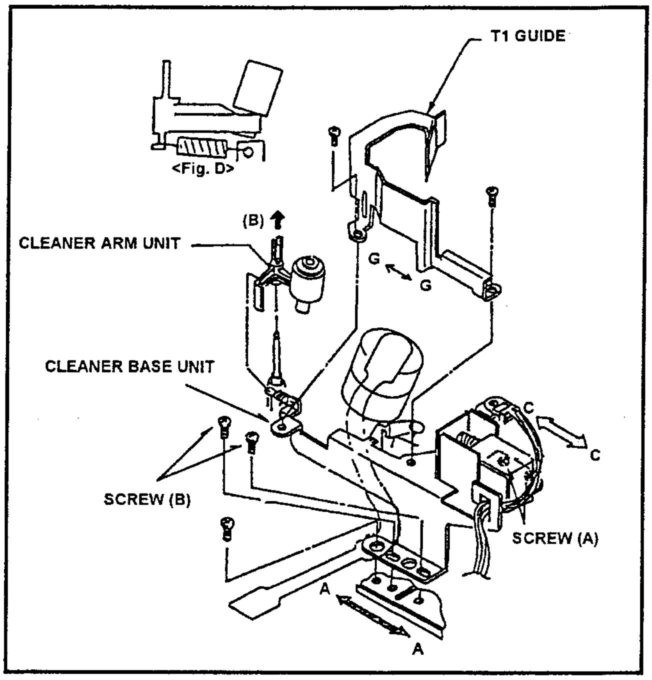

T1 GUIDE
<Fig. D>
(B)
CLEANER ARM UNIT
G
G
CLEANER BASE UNIT
C
C
SCREW (B)
SCREW (A)
A
A

Fig. 8-13-4 Cleaner Solenoid Position Adjustment

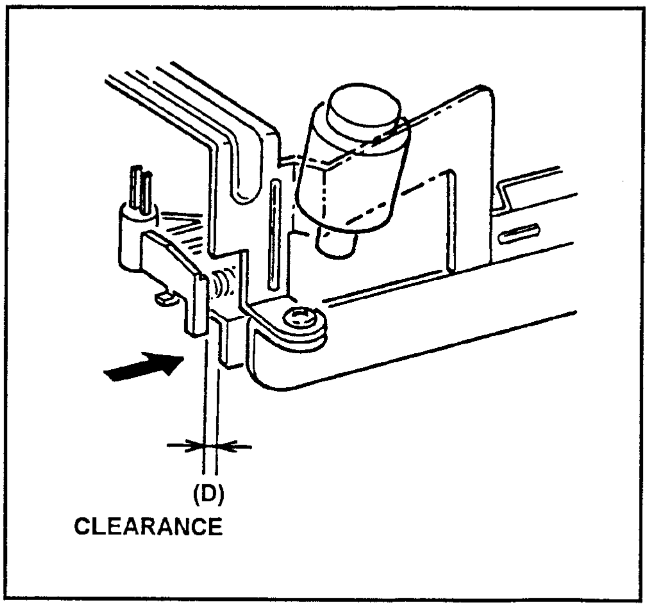

(D)
CLEARANCE

Fig. 8-13-2 Cleaner Solenoid Position Adjustment

**Note:** If removing the cleaner Base Plate, Cleaner roller Position Adjustment should be performed.

### 8-13-2. Cleaner Roller Position Adjustment

※ Required Tools : Eccentric Driver (VFK0357)

1. Observe the **clearance (A)** between Cleaner Roller and Cylinder Unit as shown in Figure 8-13-3. And make sure that it is within **1.0 to 1.2mm**.
2. If not, loosen the **2 screws (B)** and adjust the position of Cleaner Base Plate by moving to arrow direction (A ⇔ A) with the Eccentric Driver so that the **clearance (A)** is within specification. And tighten the **2 screws (B)**.

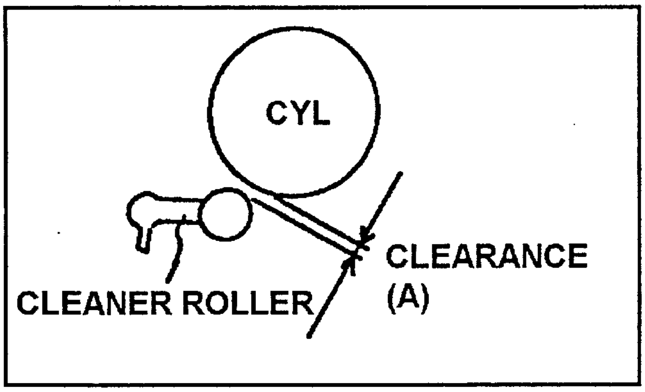


Fig. 8-13-3 Cleaner Roller Position Adjustment

## 8-14. S5 Post Base Unit Replacement

**(Removal)**

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Unscrew the **screw (A)** and remove the S5 Post Base Unit as shown in Figure 8-14-1.

**(Installation)**

1. Install the S5 post Base Unit according to the opposite procedures to removing.
2. After installing, Post Height Pre-adjustment (Refer to item 1-5 of section 3) and Linearity Adjustment (Refer to item 1-13 of section 3 [ Tape Path Adjustment Procedure ]) should be performed.

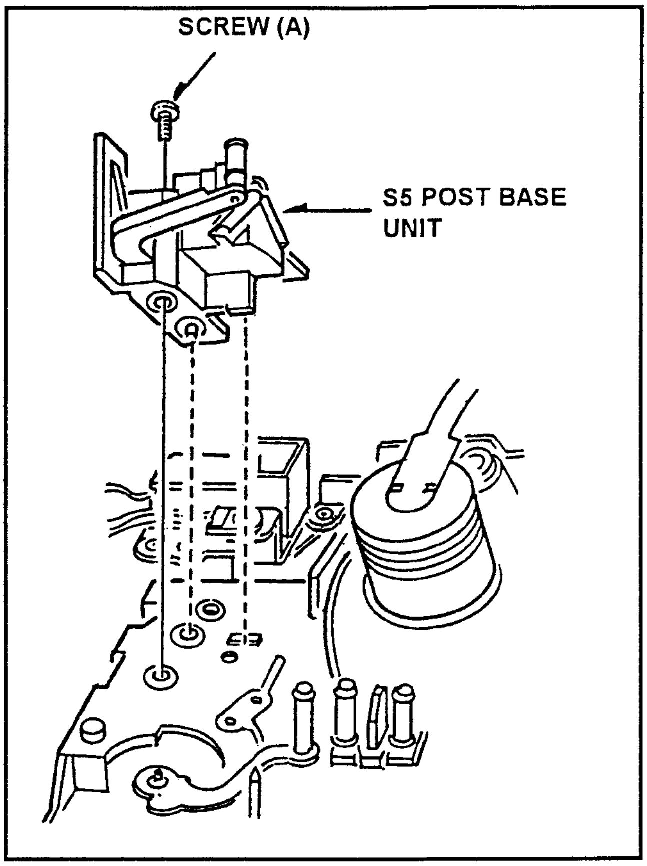


Fig. 8-14-1 Removal of S5 Post Base Unit

## 8-15. Tension Arm Unit Replacement

**(Removal)**

1. Remove the Cassette Cover and Left Side Panel.
2. Remove the Cassette Up Unit.
3. Remove the **Cut Washer (A)** and pick up the Tension Regi Spring Then remove the Tension Arm Unit as shown in Figure 8-15-1.

**(Installation)**

1. Install the new Tension Arm Unit according to the opposite procedures to removing.
2. After installing, Tension Arm Adjustment should be performed as follows.

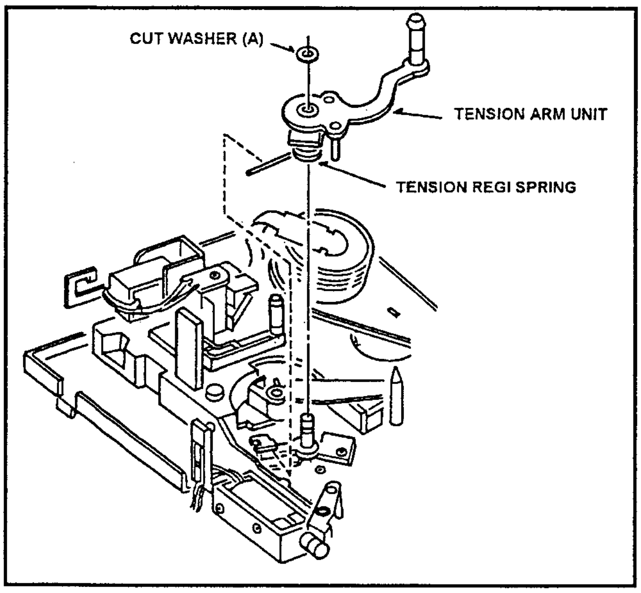
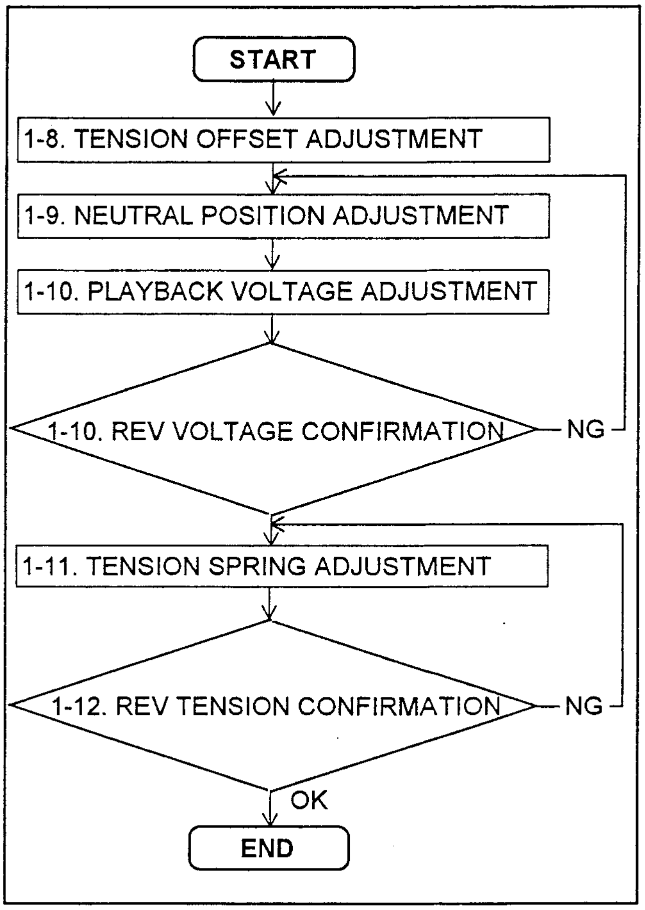

CUT WASHER (A)
TENSION ARM UNIT
TENSION REGI SPRING

Fig. 8-15-1 Removal of Tension Arm Unit

### Tension Arm Adjustment Flowchart


START
1-8. TENSION OFFSET ADJUSTMENT
1-9. NEUTRAL POSITION ADJUSTMENT
1-10. PLAYBACK VOLTAGE ADJUSTMENT
1-10. REV VOLTAGE CONFIRMATION
NG
1-11. TENSION SPRING ADJUSTMENT
1-12. REV TENSION CONFIRMATION
NG
OK
END

## 8-16. Main Cam Gear Replacement

**(Removal)**

1. Remove the Cassette Cover and Left Side Panel.
2. Remove the Cassette Up Unit.
3. Remove the Pinch Solenoid Unit (Refer to item 8-5) and Loading Motor Neutral Unit (Refer to item 8-4).
4. Remove the Main Cam Gear as shown in Figure 8-16-1.

**(Installation)**

1. Install the Main Cam Gear so that the pin of Main Cam Arm Unit (※) matches the groove position of Main Cam Gear as shown in Figure 8-16-1.
2. Follow the opposite procedures to removing.
3. After installing, Pinch Solenoid Position Adjustment is required (Refer to item 1-4 of section 3).

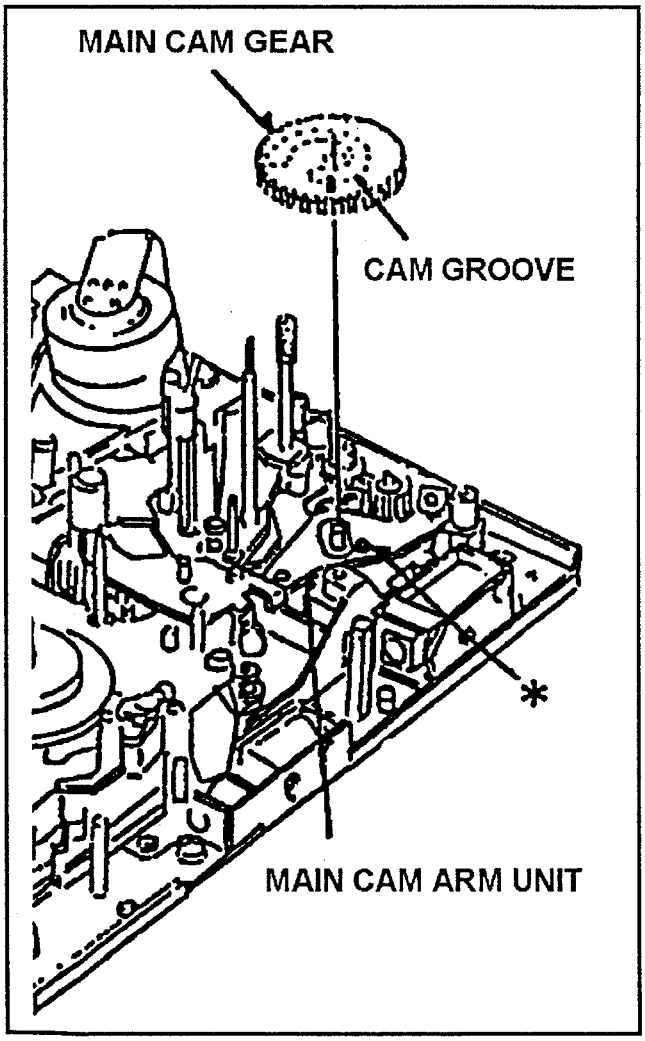


Fig. 8-16-1 Removal of Main Cam Gear

## 8-17. T4 Post Phase Adjustment

1. Confirm that the hole (B) of T4 Connector Gear was matched to hole of T4 Post as shown in figure 8-17-1.
2. Confirm the relation between portion (C) of T4 Connector Gear and **hole (A).as shown** in Figure 8-17-1.

**Note:** This confirmation should be performed on unloading condition.

3. If not, adjust the phase of T4 post follow the above procedure.

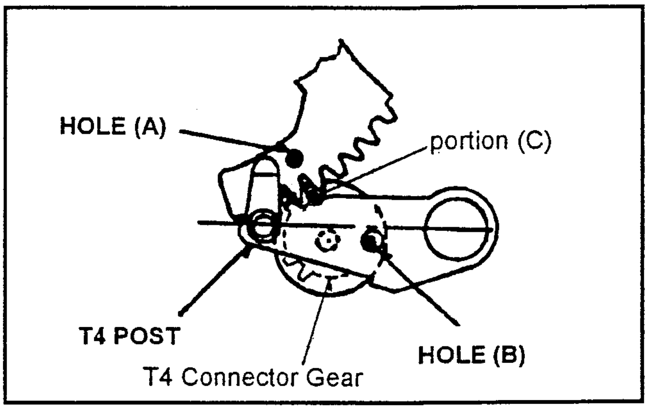
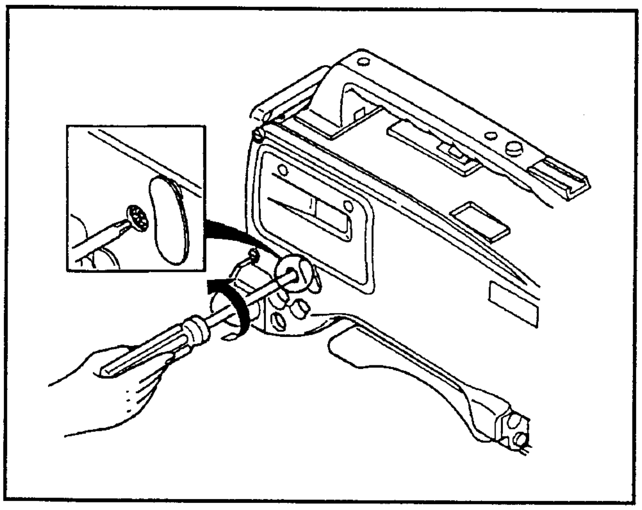


Fig. 8-17-1 Phase of T4 Post

## 9. Emergency Eject

If the cassette tape cannot be ejected with pressing EJECT button or the cassette tape may be damaged by ejecting it, the cassette tape should be ejected out by the following steps.

1. Turn the power off.
2. Open the rubber cap above the GEN LOCK IN connector. Push in and rotate the red screw counterclockwise.
3. The tape is unloaded with click.
4. Continue until the cassette tape is ejected.

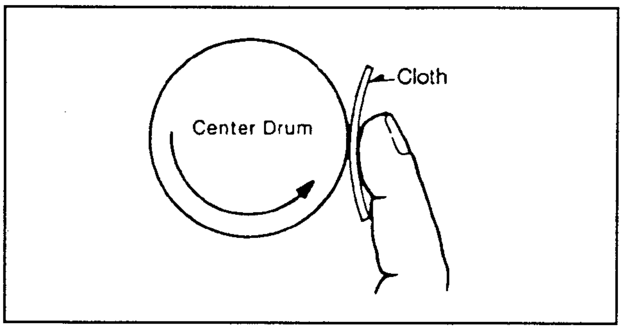


# 10. Cleaning Procedures

Make sure the power is OFF before cleaning. Use ethanol(more than 99%) as cleaning liquid.

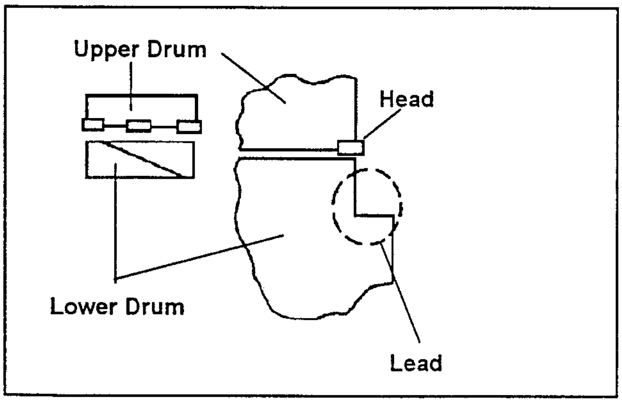
## 10-1. Cleaning of Head Chips : (Daily)

Clean heads by applying even pressure and rotating cylinder a few times. Never wipe in up and down motion. Never touch a cylinder by naked hand. First wipe with a cloth soaked by cleaning liquid. Then wipe with dry cloth.



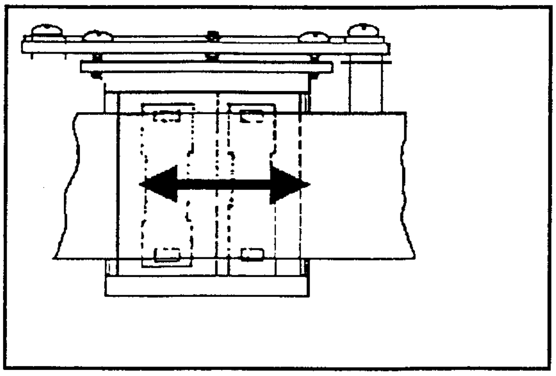
## 10-2. Cleaning of Drum Lead : (Weekly)

Be careful not to touch a head chip. Clean the drum lead with a pick.



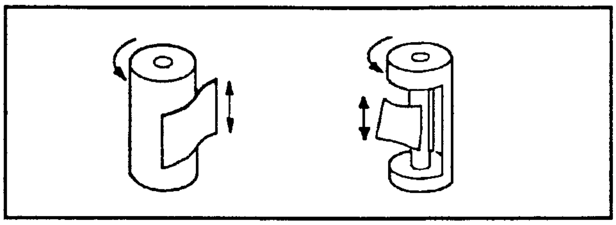
## 10-3. Cleaning of A/C Head : (Weekly)

Wipe the A/C head with a cloth soaked by cleaning liquid. Wipe again with a dry cloth.



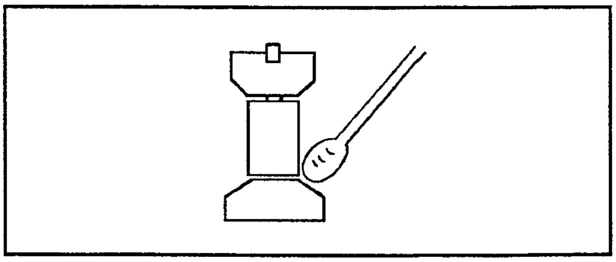
## 10-4. Cleaning of Pinch Roller and Capstan : (Weekly)

Wipe the Pinch Roller and Capstan with a cloth soaked by cleaning liquid.



## 10-5. Cleaning of Post : (Weekly)

Wind a cloth on a pick. Wipe each post dry with that pick . Wipe again with a dry cloth. For metal posts wipe with cleaning liquid. Then wipe dry again.



| Error No. | NG part | Detected Condition | Check |
|---|---|---|---|
| 04 | Pinch Solenoid Drive.<br>Reel Brake Solenoid Drive. | Drive current is supplied to solenoids more than 5 seconds. | † Drive circuits of S* or T* Brake Solenoids and Pinch Solenoid.<br>† P610-#1 and #3, P605, P608, IC501-#99 |
| 28 | Cleaner Solenoid Drive | Drive current is supplied to solenoid more than 30 seconds. | † Drive circuit of Cleaner Solenoid.<br>† IC501-#98 |
| 0B | Supply Reel | The condition that the amount of tape running is less than one-eighth of specification lasts more than 5 seconds. | † Reel motor doesn't rotate.→Drive circuit: P614(S*): P615(T*).<br>† Reel brake isn't released.→Drive circuit: P605(S*): P608(T*).<br>† Cassette is not loaded correctly on a reel.<br>† Tape is sticked to drum. |
| 0C | Take-up Reel | | |
| 0D | Capstan | The condition that FG frequency is less than half or more than twice of specification lasts more than 1.5 seconds. | † Capstan doesn't rotate.→Drive circuit: P616<br>† No copstan FG.→P616-#1 and #3. |
| 0E | Cylinder | The condition that FG frequency is less than half or more than twice of specification lasts more than 3 seconds, even after cylinder has rotated more than 2 seconds. | † Cylinder doesn't rotate.→Drive circuit: P613<br>† No cylinder FG.→P613-#9. |
| 0F | Loading | Loading or Unloading is not completed less than 10 seconds. | † Loading motor doesn't rotate. →Drive voltage : P611<br>† Take-up reel torque is over specification. |

**Note :** Connectors and ICs are located on Servo board.
S* : Supply Reel
T* : Take-up Reel
# : Pin No.

# SECTION 3

# MECHANICAL ADJUSTMENTS

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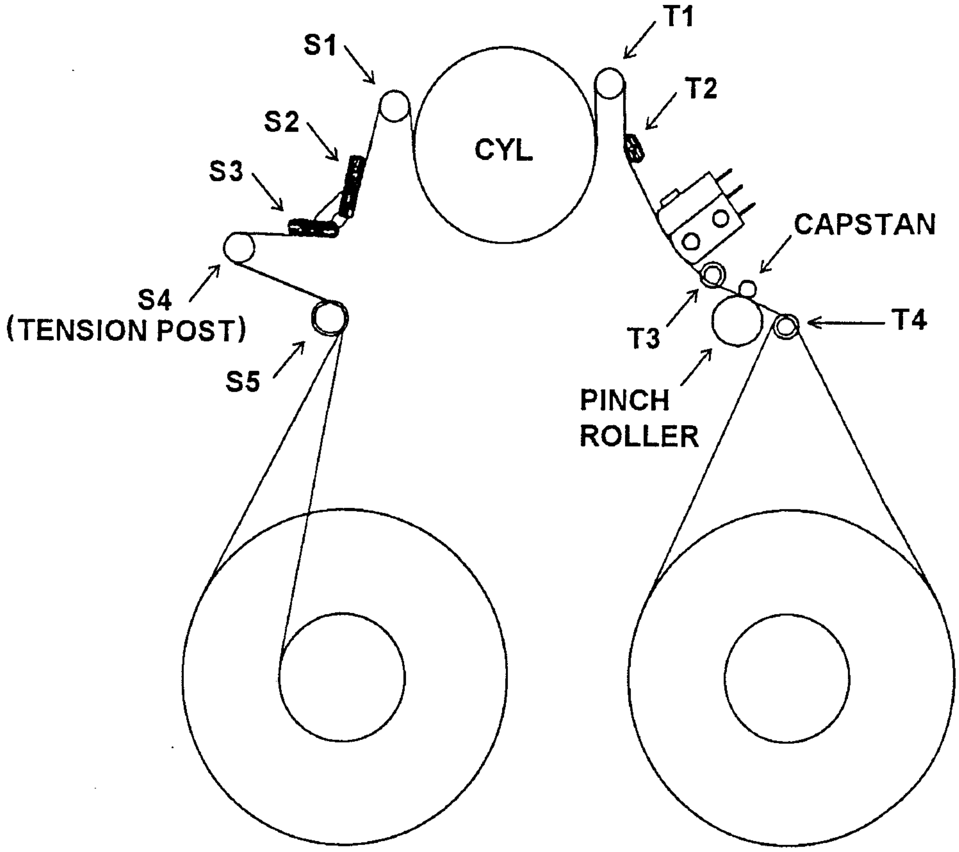
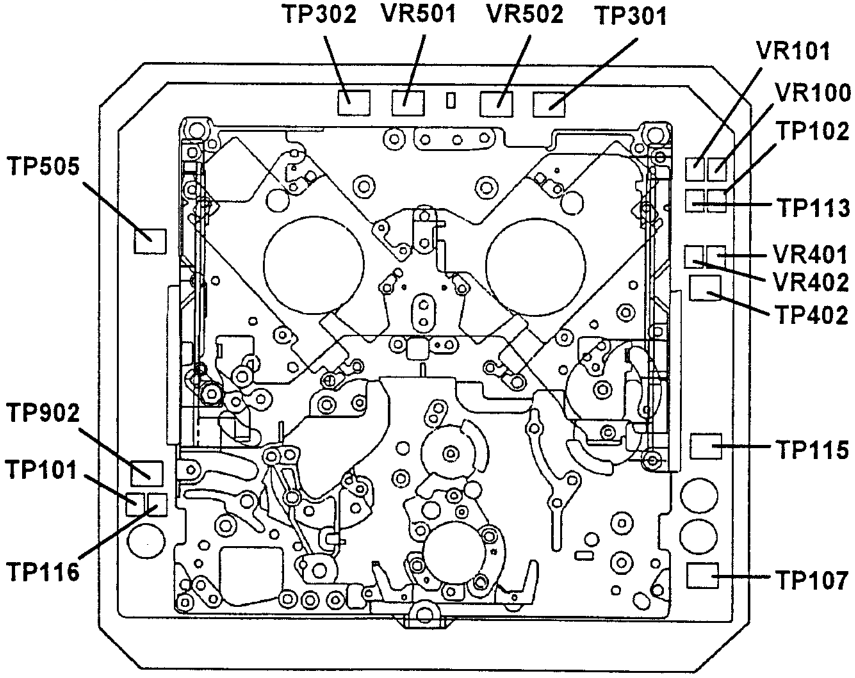
# 1. Mechanical Adjustment

## 1-1. Name of tape transportation


S1
T1
T2
CYL
S2
S3
CAPSTAN
S4
(TENSION POST)
T3
T4
S5
PINCH
ROLLER

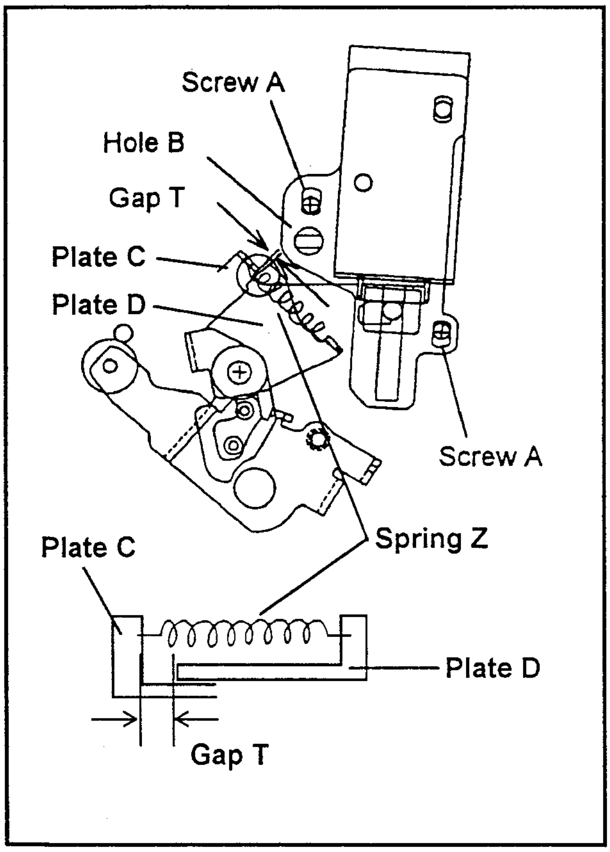
## 1-2. TP & VR location


TP302
VR501
VR502
TP301
VR101
VR100
TP102
TP505
TP113
VR401
VR402
TP402
TP902
TP101
TP116
TP115
TP107

## 1-3. Pinch Solenoid Adjustment

| | |
|---|---|
| **SPEC.** | T = 0.3mm |
| **TEST** | Gap T |
| **ADJUST** | Screw C, Hole B |
| **MODE** | Eject( Power OFF) |
| **TOOL** | VFK0357 |

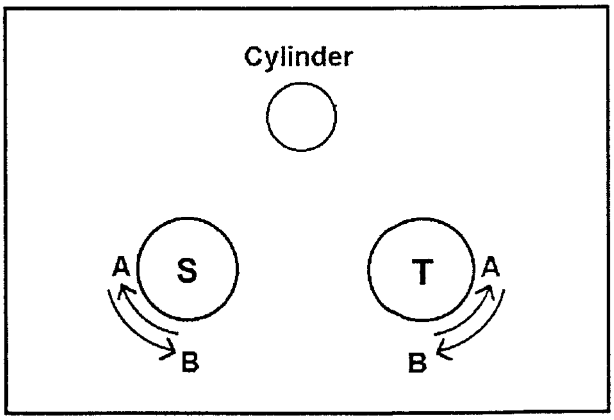
1. Confirm the power off.
2. Push the pinch roller by hand to be close to capstan.
3. Push the pinch solenoid by hand so that the pinch roller contacts capstan.
4. Loosen the **two screws A**.
5. Adjust the **hole B** so that **gap T** is within specification.
6. Tighten the two **screws A**.



## 1-4. Main Brake Torque Confirmation

| | |
|---|---|
| **SPEC.** | Direction A : more than 80g<br>Direction B : more than 15g |
| **TEST** | S Reel, T Reel |
| **MODE** | Eject( Power OFF) |
| **TOOL** | VFK71, VFK1191, VFK1152 |

1. Confirm the power off.
2. Remove the Cassette Up Unit.
3. Install the adapter(VFK1152) to the torque gauge (VFK71).
4. Put the torque gauge on **S Reel**.
5. Turn the torque gauge to **direction A** until **S Reel** slips against brake.
6. Confirm the torque is within specification.
7. Put the torque gauge on **T Reel**.
8. Turn the torque gauge to **direction A** until **T Reel** slips against brake.
9. Confirm the torque is within specification.
10. Install the adapter(VFK1152) to the torque gauge (VFK1191).
11. Put the torque gauge on **S Reel**.
12. Turn the torque gauge to **direction B** until **S Reel** slips against brake.
13. Confirm the torque is within specification.
14. Put the torque gauge on **T Reel**.
15. Turn the torque gauge to **direction B** until **T Reel** slips against brake.
16. Confirm the torque is within specification.



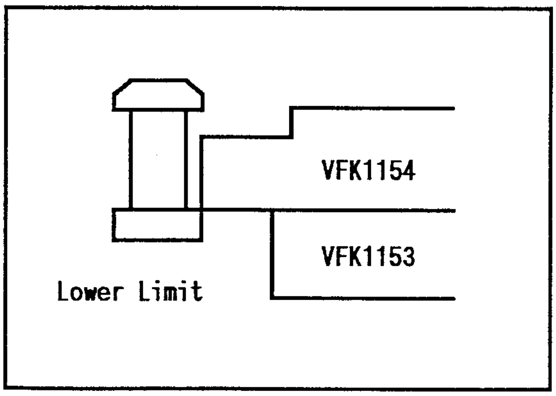
## 1-5. Post Height Preadjustment

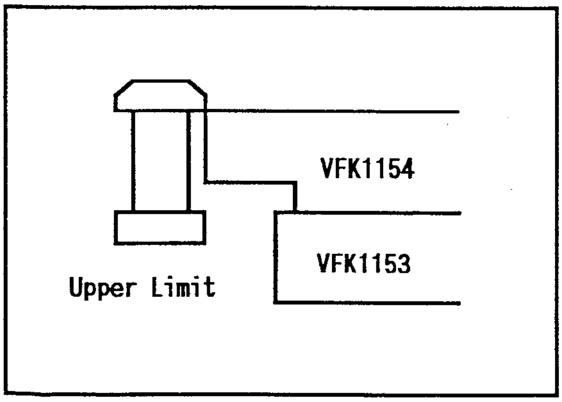
| | |
|---|---|
| Mode | EJECT (Power OFF ) |
| Tool | VFK1153, VFK1154 |

1. Turn the power OFF and then set the tube* to cover the sensor LED and place the unit in no tape loading mode.
2. Install the Mech. Neutral Plate and adjust each post height as shown in figure.

**Note. Lower***: Turn **S4** and **S5** posts 1 round more counterclockwise from lower limit position.

| Post | Limit | Post Driver |
|---|---|---|
| S4 | Lower* | VFK1149 |
| S5 | Lower* | VFK1149 |
| T3 | Lower | VFK1151 (2.5 mm Nut Driver ) |
| T4 | Lower | VFK1151 (2.5 mm Nut Driver ) |





## 1-6. Reel Torque Adjustment

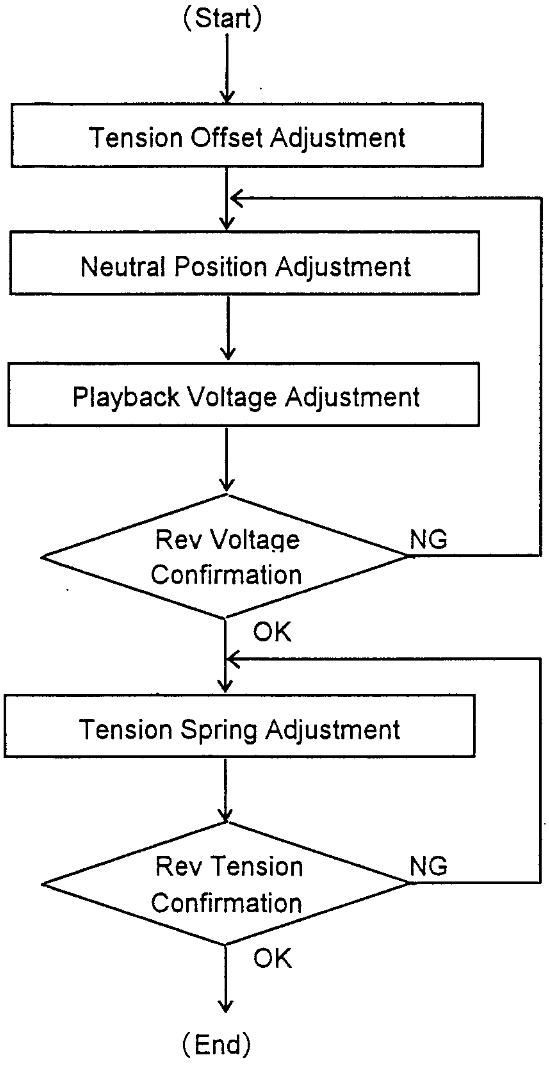
| | |
|---|---|
| **BOARD** | Servo |
| **SPEC.** | 20±2mV |
| **TEST** | TP301(S), TP302(T), TG300 (GND) |
| **ADJUST** | VR501(T), VR502(S) |
| **MODE** | PLAY |
| **M.EQ** | Digital Volt Meter |

1. Confirm the power off and make a short-circuit between **TP116** and **TP505**.
2. Turn the power ON and then set the tube* to cover the sensor LED and place the unit in no tape loading mode.
3. Hold the S-Reel by hand and press the PLAY key.
4. Adjust the **VR502** so that the **TP301**(for S Reel) is within specification.
5. Hold the T-Reel by hand and press the PLAY key.
6. Adjust the **VR501** so that the **TP302**(for T Reel) is within specification.
7. Make a open-circuit between **TP116** and **TP505**.

**Note.**

1. Make a tube* by yourself.

## 1-7. Tension Adjustment Flowchart


(Start)
Tension Offset Adjustment
Neutral Position Adjustment
Playback Voltage Adjustment
Rev Voltage Confirmation
NG
OK
Tension Spring Adjustment
Rev Tension Confirmation
NG
OK
(End)

## 1-8. Tension Offset Adjustment

| | |
|---|---|
| **BOARD** | Servo |
| **SPEC.** | 2.5±0.05V |
| **TEST** | TP402 |
| **ADJUST** | VR402 |
| **MODE** | EJECT |
| **M.EQ** | Digital Volt Meter |

1. Adjust the **VR402** so that the DC voltage at **TP402** is within specification.

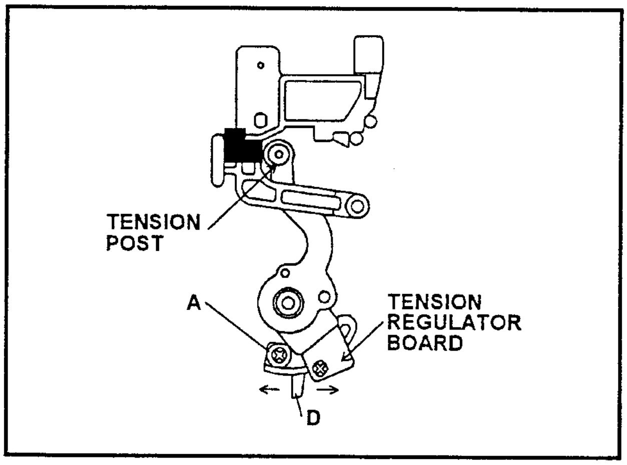
## 1-9. Neutral Position Adjustment

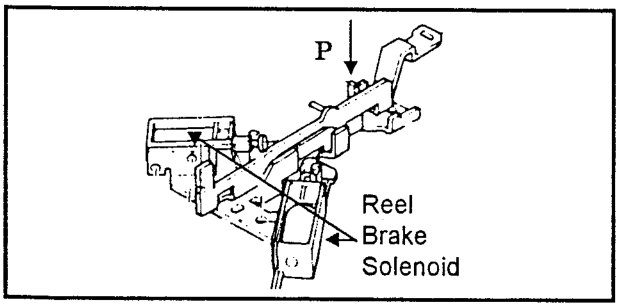
| | |
|---|---|
| **BOARD** | Servo |
| **SPEC.** | 2.5±0.1V |
| **TEST** | TP402 |
| **ADJUST** | Sensor |
| **MODE** | STOP |
| **M.EQ** | Digital Volt Meter, VFK1208 |

1. Remove the cassette up unit.
2. Set the tube* to cover the sensor LED and press the lever **P** to place the unit in no tape loading mode.
3. Install the black spacer with hole(VFK1208) as shown in figure. Adjust the sensor position so that the **TP402** voltage is within specification. To adjust, loosen the **screw A** and adjust the **lever D.**

**Note.**

1. Make a tube* by yourself.





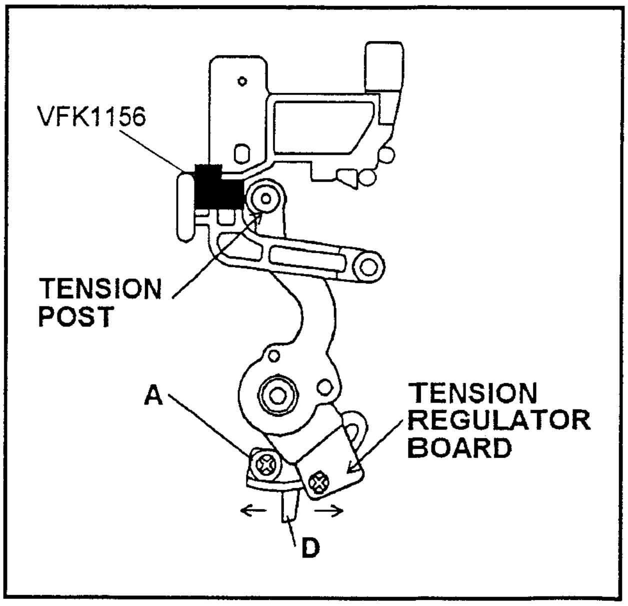
## 1-10. Play & Rev Tension Adjustment

| | |
|---|---|
| **BOARD** | Servo |
| **SPEC.** | (PLAY)3.8±0.05V<br>(REV) 1.2±0.3V |
| **TEST** | TP402 |
| **ADJUST** | VR401 |
| **MODE** | STOP |
| **M.EQ** | Digital Volt Meter, VFK1156, VFK1155 |

1. Set the tube* to cover the sensor LED and place the unit in no tape loading mode.
2. Install the black spacer(VFK1156) as shown in figure. Adjust the **VR401** so that the **TP402** voltage is within specification(PLAY). To adjust, loosen the **screw A** and adjust the **lever D.**
3. Install the gold spacer(VFK1155) instead of the black one. Confirm that the **TP402** voltage is within specification(REV).

**Note.**

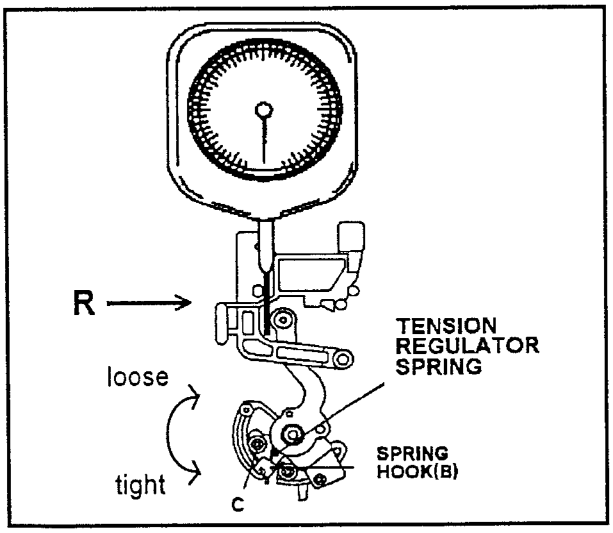
1. Make a tube* by yourself.
2. In case that it is impossible to adjust within specification, readjust from Neutral Position Adjustment.

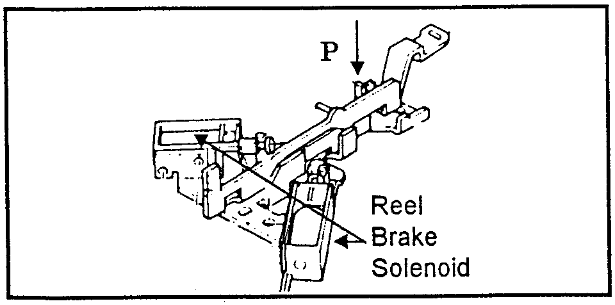


## 1-11. Tension Spring Adjustment

| | |
|---|---|
| **BOARD** | Servo |
| **SPEC.** | 11 ± 1 g |
| **TEST** | TP402 |
| **ADJUST** | Spring hook(B) |
| **MODE** | STOP |
| **M.EQ** | Digital Volt Meter<br>VFK1188 (30g Dial Tension Gauge) |

1. Remove the cassette up unit.
2. Set the tube* to cover the sensor LED and press the lever **P** to place the unit in no tape loading mode.
3. Insert the tension gauge to push the tension post to the direction R until the voltage at the **TP402** is **3.8V**(PLAY position).
4. Adjust the position of **hook(B)** so that the indication of gauge is within specification. To adjust hook(B), loosen the **screw (C)**.

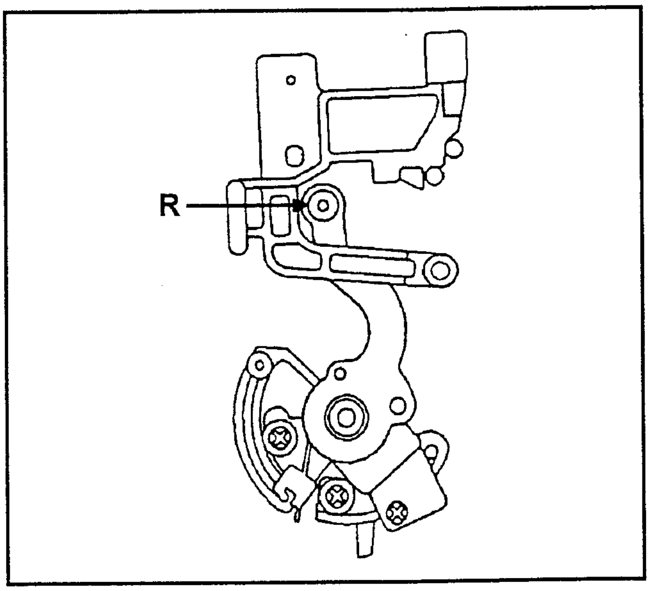




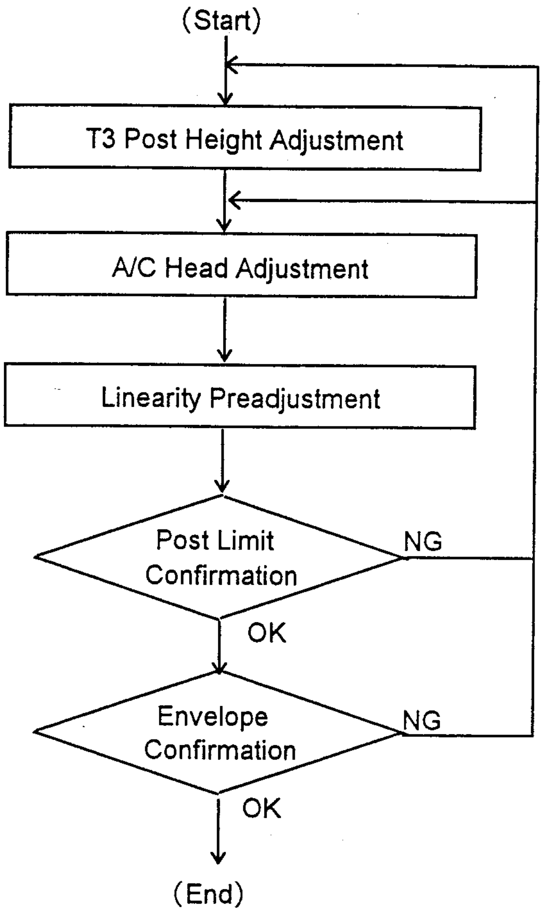
## 1-12. REV Tension Confirmation

| | |
|---|---|
| **BOARD** | Servo |
| **SPEC.** | 18 ± 2 g |
| **TEST** | TP402 |
| **MODE** | STOP |
| **M.EQ** | Digital Volt meter<br>VFK1188 (30g Dial Tension Gauge) |

1. Set the tube* to cover the sensor LED and place the unit in no tape loading mode.
2. Insert the tension gauge to push the tension post to the direction R until the voltage at the **TP402** is **1.2V**(REV position).
3. Confirm that the indication of gauge is within specification. If not, make the Tension Spring Adjustment again.



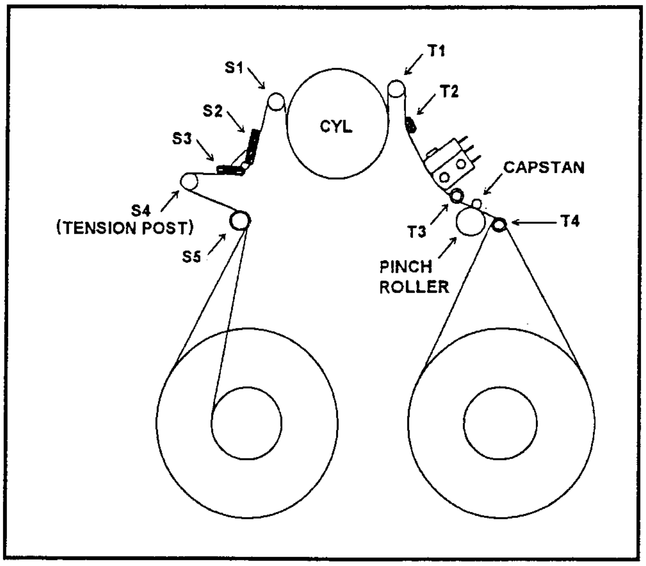
## 1-13. Tape Path Adj. Flowchart


(Start)
T3 Post Height Adjustment
A/C Head Adjustment
Linearity Preadjustment
Post Limit Confirmation
NG
OK
Envelope Confirmation
NG
OK
(End)

## 1-14. T3 Post Height Adjustment

| | |
|---|---|
| **SPEC.** | No tape curl |
| **ADJUST** | T3 Post Height |
| **MODE** | PLAY |
| **TAPE** | Blank tape |
| **M.EQ** | VFK1151(Box Driver) |

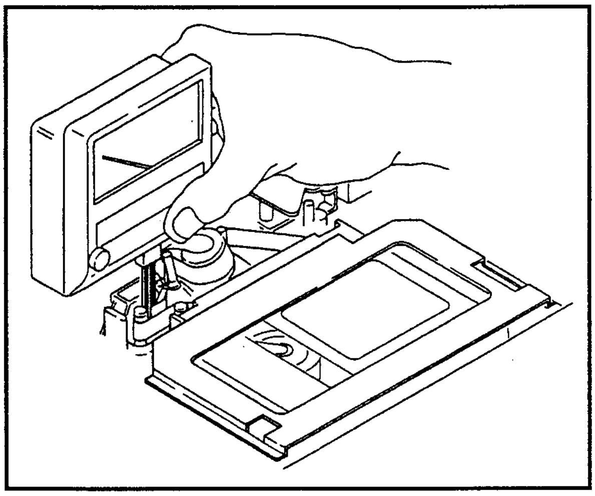
1. Confirm that the tape has no curl at T3 post.
2. If not, adjust the **T3 post height** so that no tape curl occurs to the tape edge.

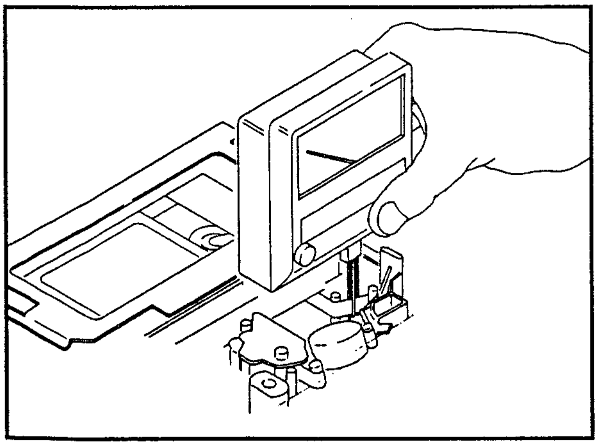

S1
S2
S3
S4
(TENSION POST)
S5
CYL
T1
T2
CAPSTAN
T3
T4
PINCH ROLLER

## 1-15. Tension Confirmation

| | |
|---|---|
| **SPEC.** | (PLAY) 6.0±1g, (REV) 9.0±2g |
| **MODE** | PLAY, REV |
| **TAPE** | M size cassette(63min) |
| **M.EQ** | VFK1145(Tension Meter) |

1. Play back beginning portion of the tape.
2. Insert the tension meter between **S3 post** and **S4 post.**(Top figure)
3. Confirm the tension is within specification.
4. Place the unit in REV mode.
5. Insert the tension meter between **S4 post** and **S5 post.**(Bottom figure)
6. Confirm the tension is within specification.

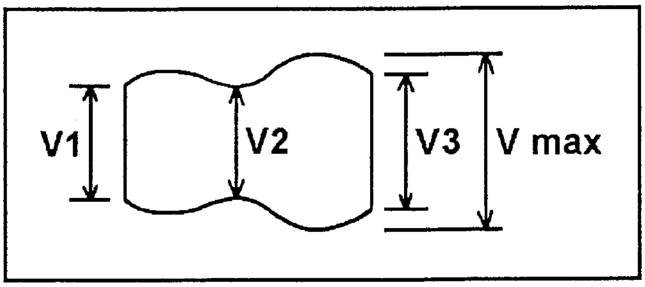




## 1-16. Linearity Preadjustment

| | |
|---|---|
| **SPEC.** | V1/Vmax, V2/Vmax, V3/Vmax ≧ 0.8 |
| **TEST** | TP500(RF Board) |
| **ADJUST** | S1, T1 Post Height |
| **MODE** | PLAY(ATF) |
| **TAPE** | (NTSC)VFM3580KM(No.1 : 0~14min)<br>(PAL)VFM3680KM(No.1 : 0~10min) |
| **M.EQ** | Oscilloscope, VFK1149 (Post Driver) |

1. Playback the alignment tape.
2. Adjust the **S1 and T1 posts** so that the envelope output is within specification.



## 1-17. Post Limit Confirmation 1

| | |
|---|---|
| **SPEC.** | Post limits shown in the table.<br>No tape curl |
| **MODE** | PLAY |
| **TAPE** | (NTSC)VFM3580KM(No.1 : 0~14min)<br>(PAL)VFM3680KM(No.1 : 0~10min) |
| **M.EQ** | VFK1149 (Post Driver)<br>VFK1151 (Box Driver) |

**Post Limit Table**

| Post | Limit | Adjustment |
|---|---|---|
| S5 Post | Lower Limit or Free | S5 Post Height |
| S4 Post | Lower Limit | S4 Post Height |
| S1 Post | Upper Limit | Linearity |
| T1 Post | Upper Limit | Linearity |
| T3 Post | Lower Limit | T3 Post Height |
| T4 Post | Lower Limit or Free | T4 Post Height |

1. Confirm the post limit of each post and adjust in case of need.

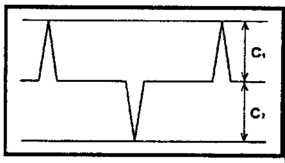
## 1-18. A/C Head Height Adjustment

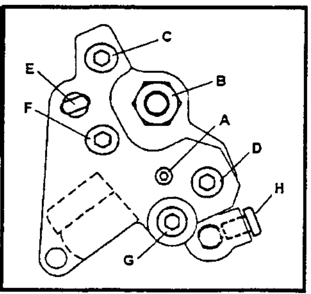
| | |
|---|---|
| **BOARD** | Servo |
| **SPEC.** | CTL Output : C1, C2 ≧ 220 (mV) |
| **TEST** | TP107 : CTL Output |
| **ADJUST** | Screw B , H(A/C Head) |
| **MODE** | PLAY |
| **TAPE** | (NTSC)VFM3580KM(No.1 : 0~14min)<br>(PAL)VFM3680KM(No.1 : 0~10min) |
| **M.EQ** | Oscilloscope<br>VFK1150, VFK1190 |

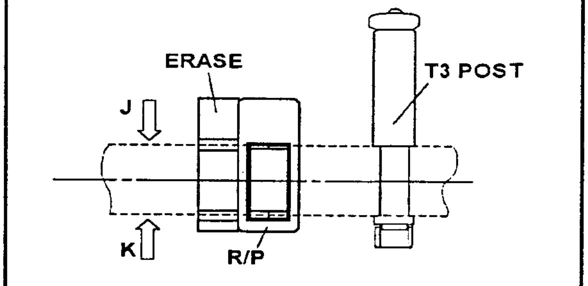
1. Monitor the **TP107** on the Servo board.
2. Press the tape to the direction **J** or **K** and confirm that the **CTL** output level is **decreased.**
3. If direction **J** increases CTL output, loosen the **screw H** and adjust the **screw B counterclockwise** until CTL output is maximized.
4. If direction **K** increases CTL output, loosen the **screw H** and adjust the **screw B clockwise** until CTL output is maximized.
5. After tightening the **screw H(2.0kg)**, confirm the level again.

**Note.**

1. Adjust alternately with other A/C head adjustments(Azimuth, Height).







A/C HEAD HEIGHT

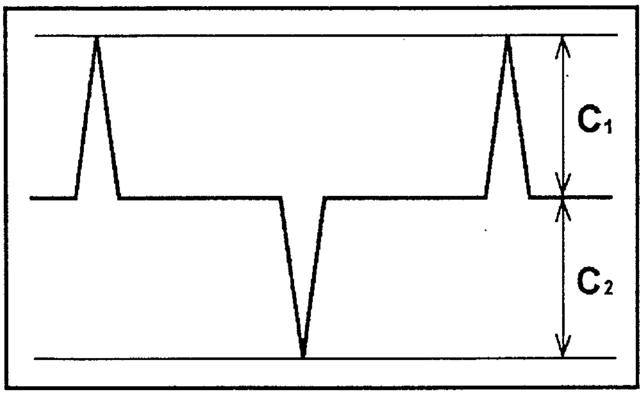
## 1-19. A/C Head Azimuth Adjustment

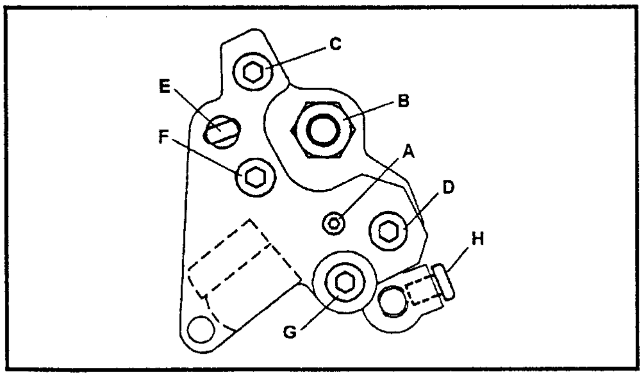
| | |
|---|---|
| BOARD | Servo |
| SPEC. | CTL Output : C1, C2 = C1 max, C2 max |
| TEST | TP107 : CTL Output |
| ADJUST | Screw F(A/C Head) |
| MODE | PLAY |
| TAPE | (NTSC)VFM3580KM(No.1 : 0~14min)<br>(PAL)VFM3680KM(No.1 : 0~10min) |
| M.EQ | Oscilloscope, VFK1148(Box Driver) |

1. Monitor the **TP107** on the Servo Board and adjust the **screw F** so that the **TP107** is maximized.

**Note.**

1. Adjust alternately with other A/C head adjustments(Tilt, Height).

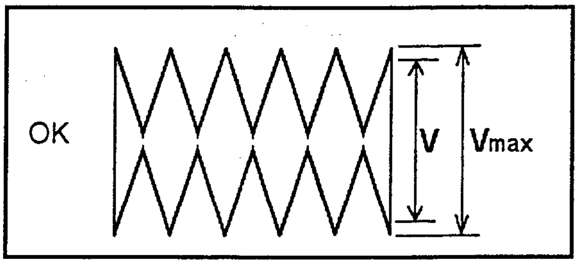


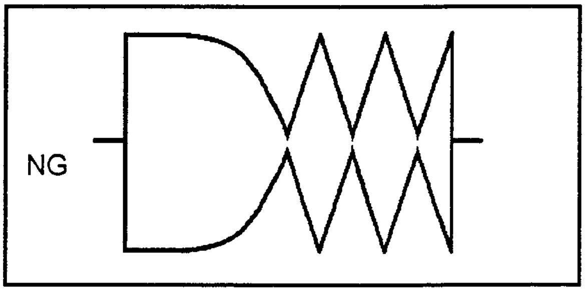


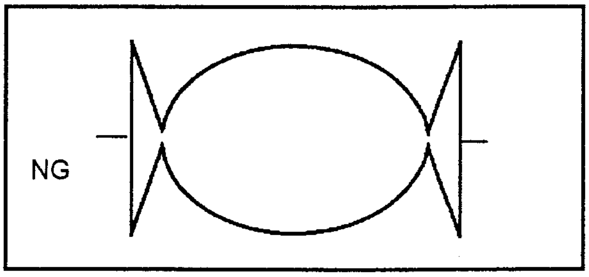
## 1-20. Envelope Confirmation 1

| | |
|---|---|
| **SPEC.** | V/Vmax ≧ 0.8 |
| **TEST** | TP500(RF Board) |
| **MODE** | FF, REW, REV(PLAY&REW) |
| **TAPE** | (NTSC)VFM3580KM(No.1 : 0~14min)<br>(PAL)VFM3680KM(No.1 : 0~10min) |
| **M.EQ** | Oscilloscope |

1. Confirm the envelope in each mode.
2. If out of specification, adjust the **S4 post height** again.



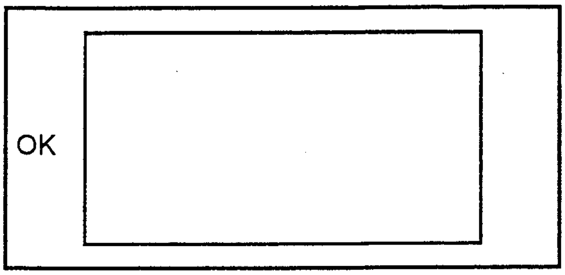


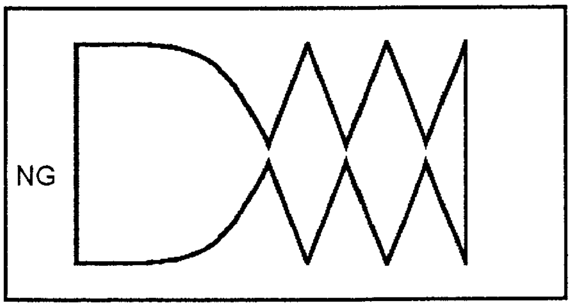


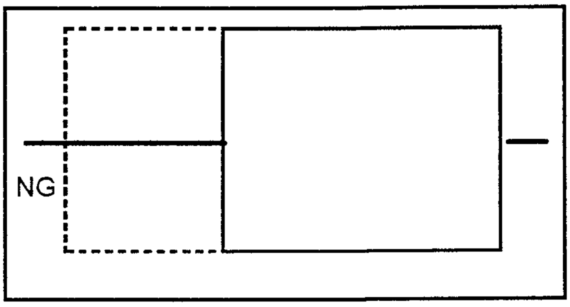
## 1-21. Envelope Confirmation 2

| | |
|---|---|
| **SPEC.** | Envelope appears immediately. |
| **TEST** | TP500(RF Board) |
| **MODE** | REW/REV(PLAY&REW) → PLAY<br>FF → PLAY<br>LOADING → PLAY |
| **TAPE** | (NTSC)VFM3580KM(No.1 : 0~14min)<br>(PAL)VFM3680KM(No.1 : 0~10min) |
| **M.EQ** | Oscilloscope |

1. Confirm that the envelope appears immediately when the mode is switched from REW to PLAY, from REV to PLAY, from FF to PLAY and from LOADING to PLAY.
2. If out of specification, adjust the **S4 post height** again.







## 1-22. S4 Post Height Adjustment

| | |
|---|---|
| **SPEC.** | Envelope appears immediately. |
| **TEST** | TP500(RF Board) |
| **ADJUST** | S1, T1, S4 Post |
| **MODE** | REW/REV(PLAY&REW) → PLAY<br>FF → PLAY<br>LOADING → PLAY |
| **TAPE** | (NTSC)VFM3580KM(No.1 : 0～14min)<br>(PAL)VFM3680KM(No.1 : 0～10min) |
| **M.EQ** | Oscilloscope |

1. This adjustment must be done only when out of specification in Linearity Preadjustment, Envelope Confirmation1 or 2.
2. Turn the **S4 post 90 degrees counterclockwise** and adjust **S1** and **T1** posts again.
3. Confirm that the envelope appears immediately when the mode is switched from REW to PLAY, from REV to PLAY, from FF to PLAY and from LOADING to PLAY.
4. If out of specification, repeat **2.** again. Do not turn the S4 post more than 360 degrees.

## 1-23. Post Limit Confirmation 2

| | |
|---|---|
| **SPEC.** | Post limits shown in the table.<br>No tape curl |
| **MODE** | REV(PLAY&REW) |
| **TAPE** | (NTSC)VFM3580KM(No.1 : 0～14min)<br>(PAL)VFM3680KM(No.1 : 0～10min) |
| **M.EQ** | VFK1149 (Post Driver)<br>VFK1151 (Box Driver) |

Post Limit Table

| Post | Limit | Adjustment |
|---|---|---|
| S5 Post | Free | S5 Post Height |
| S4 Post | Lower Limit or Free | S4 Post Height |
| S1 Post | Upper Limit | Linearity |
| T1 Post | Free | Linearity |
| T3 Post | Lower Limit | T3 Post Height |
| T4 Post | Lower Limit | T4 Post Height |

1. Confirm the post limit of each post and adjust again in case of need.

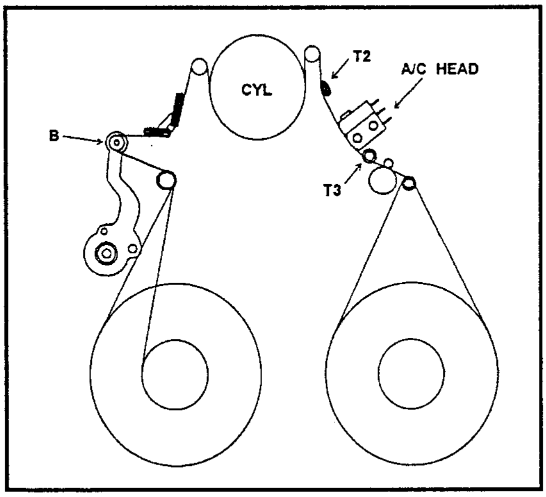
## 1-24. A/C Head Tilt Adjustment

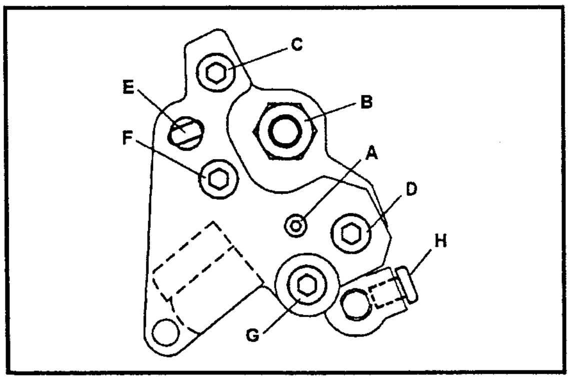
| | |
|---|---|
| SPEC. | No tape curl, Lower limit at T3 post |
| ADJUST | Screws A and G (A/C Head) |
| MODE | PLAY |
| TAPE | Blank tape |
| M.EQ | VFK1148, VFK1178(Hex. Wrench) |

1. Confirm that the **screw (G)** is tightened with **1.0kg** of **torque.**
2. Play back the tape and adjust the A/C head tilt with **screw(A)** so that the tape path has lower limit at T3 post.

**Note.**

1. Screw(A) : clockwise : Tape goes up at T3 post. counterclockwise : Tape goes down.
2. The final touch of the adjustment must be turned clockwise.
3. Adjust alternately with each A/C head adjustment(Azimuth, Height).





## 1-25. Post Limit Confirmation 3

| | |
|---|---|
| SPEC. | Post limits shown in the table.<br>No tape curl |
| MODE | FF, REW |
| TAPE | M cassette (beginning or ending portion)<br>(NTSC)VFM3580KM(No.1 : 0~14min)<br>(PAL)VFM3680KM(No.1 : 0~10min) |
| M.EQ | VFK1149 (Post Driver<br>VFK1151 (Box Driver) |

**Post Limit Table**

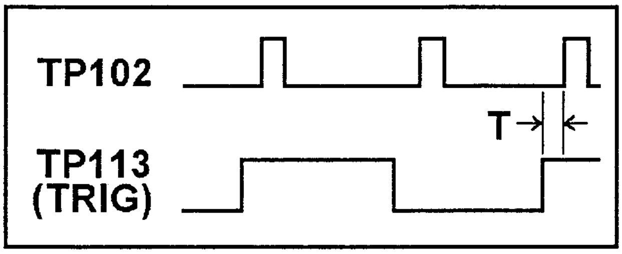
| Post | Limit | Adjustment |
|---|---|---|
| S5 Post | Free | S5 Post Height |
| S4 Post | Lower Limit or Free | S4 Post Height |
| S1 Post | Upper Limit | Linearity |
| T1 Post | Free | Linearity |
| T3 Post | Free | T3 Post Height |
| T4 Post | Lower Limit or Free | T4 Post Height |

1. Confirm **Post Limit Confirmation 1** and **2** playing back beginning or ending portion of M cassette.
2. Confirm the post limit of each post and adjust again in case of need.
3. If T3 post is adjusted, confirm that the tape has no curl at T3 post when loading or unloading.

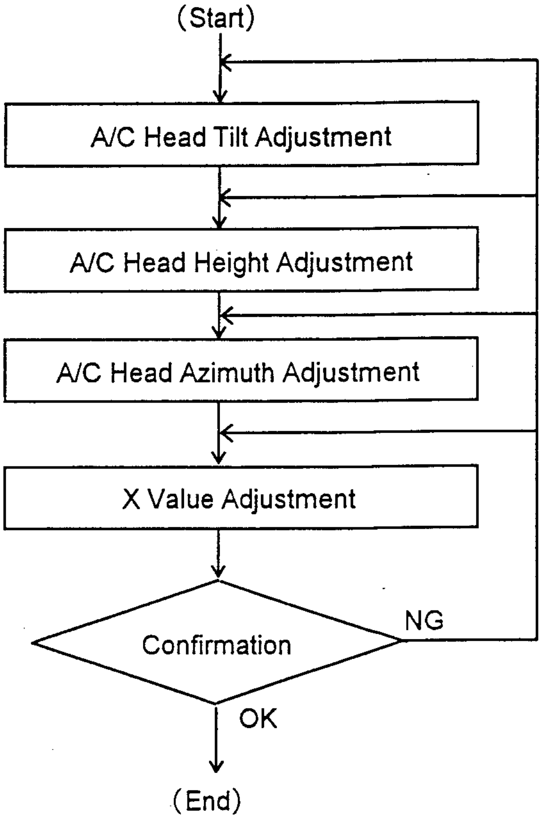
## 1-26. PG Shifter Adjustment

| | |
|---|---|
| **BOARD** | Servo |
| **SPEC.** | 126.3±2.5 μs |
| **TEST** | TP113, TP102 |
| **ADJUST** | VR101 |
| **MODE** | PLAY |
| **TAPE** | (NTSC)VFM3580KM(No.1 : 0~14min)<br>(PAL)VFM3680KM(No.1 : 0~10min) |
| **M.EQ** | Oscilloscope |

1. Adjust the **VR101** so that the T is within specification.(Trigger : **TP113**).

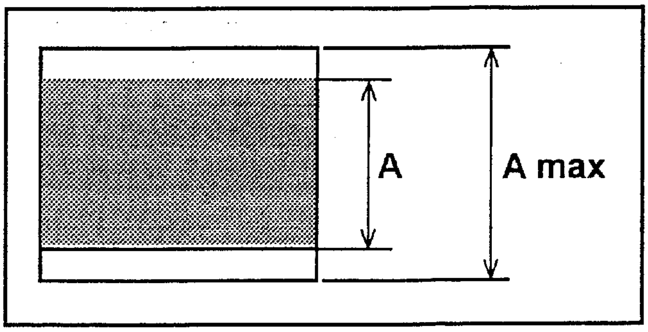

TP102
T
TP113
(TRIG)

## 1-27. A/C Head Adj. Flowchart


(Start)
A/C Head Tilt Adjustment
A/C Head Height Adjustment
A/C Head Azimuth Adjustment
X Value Adjustment
Confirmation
NG
OK
(End)

## 1-28. A/C Head Tilt Confirmation

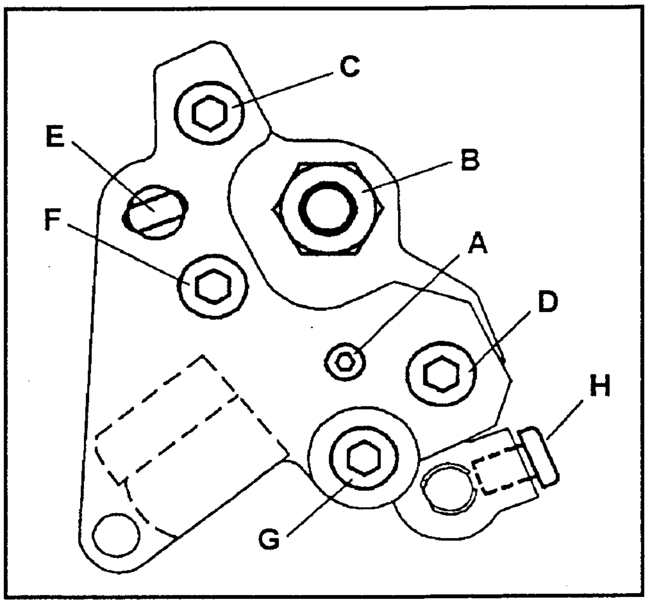
| | |
|---|---|
| **SPEC.** | CUE Output : A/Amax ≧ 0.9 |
| **TEST** | TP505(Audio LCD Board) |
| **ADJUST** | Screw A, G(A/C Head) |
| **MODE** | PLAY |
| **TAPE** | (NTSC)VFM3580KM(No.1 : 14~22min)<br>(PAL)VFM3680KM(No.1 : 14~22min) |
| **M.EQ** | Oscilloscope<br>VFK1178, VFK1148 (Hex Wrench) |

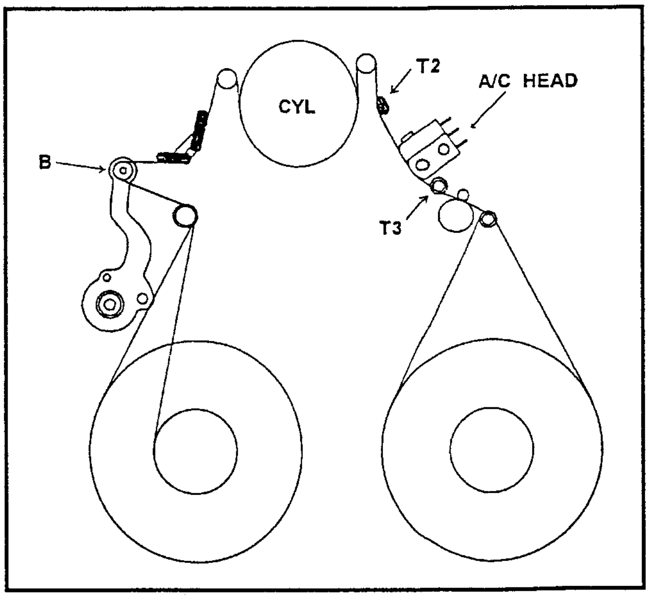


1. Playback the CUE portion(6kHz) of the Alignment tape.
2. Confirm that the **screw G** and **H** are not loosened.
3. Vibrate the tension arm horizontally and confirm that the output level is within specification.
4. If out of specification, loosen the **screw G** and adjust the **screw A**, then tighten the **screw G** with **1.0kg** torque

**Note.**

1. The final touch of the adjustment must be turned clockwise. After the adjustment, confirm that the screw A is not loosened.
2. When the screw A is adjusted, make Post Limit Confirmation 1 again.





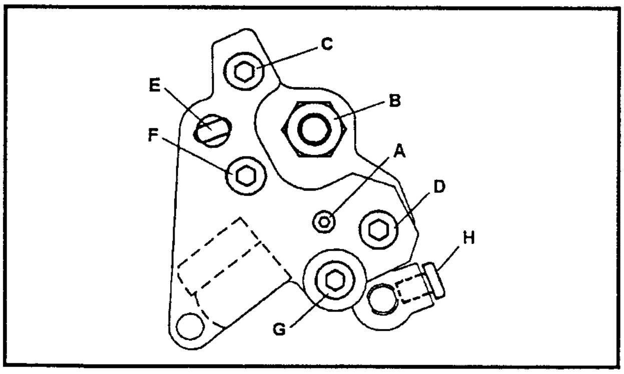
## 1-29. A/C Head Height Confirmation

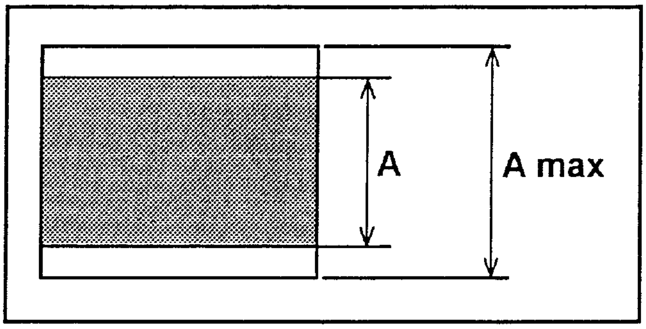
| | |
|---|---|
| **SPEC.** | CUE Output : A = A max<br>CTL Output : C1, C2 ≧ 220mV |
| **TEST** | TP505 (Audio LCD Board)<br>TP107 (Servo Board) |
| **ADJUST** | Screw B, H (A/C Head) |
| **MODE** | PLAY |
| **TAPE** | (NTSC)VFM3580KM(No.1 : 14~22min)<br>(PAL)VFM3680KM(No.1 : 14~22min) |
| **M.EQ** | Oscilloscope,<br>VFK1150, VFK1190(Hex L type) |

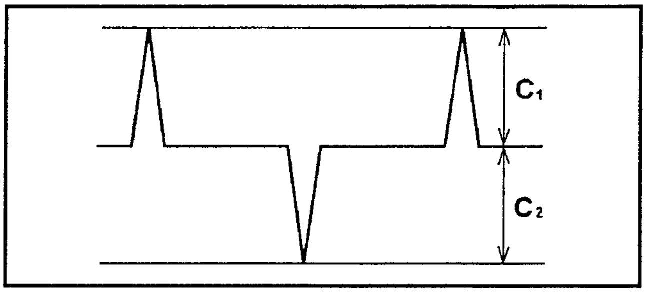
1. Confirm that the **screw H** is tightened.
2. Playback the CUE portion(6kHz) of the Alignment tape.
3. Push the tape to the **direction J** or **K** and confirm that the **TP505** level is not increased.
4. If it is increased, make "A/C Head Height Adjustment" again.

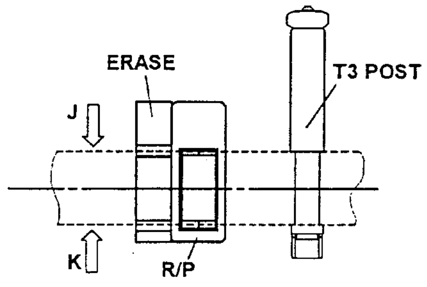
**Note.**

1. Adjust alternately with A/C Head Azimuth adjustments.







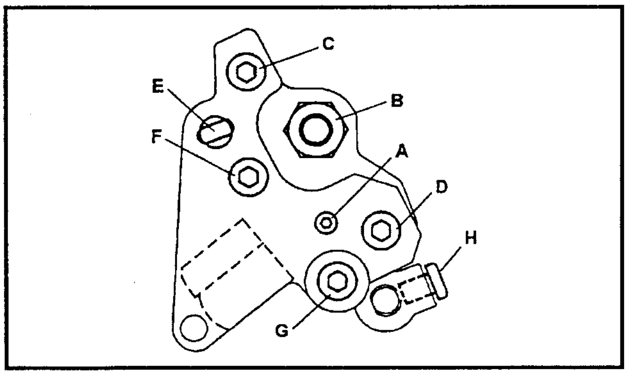


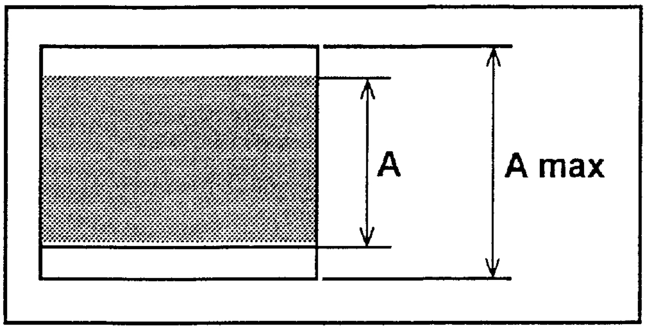
A/C HEAD HEIGHT

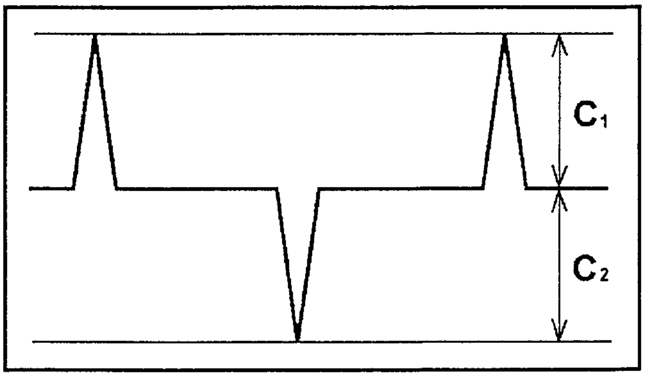
## 1-30. A/C Head Azimuth Confirmation

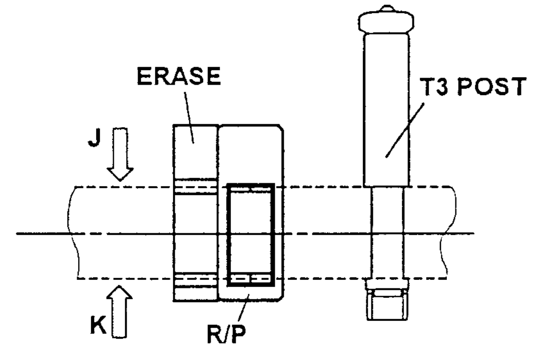
| | |
|---|---|
| SPEC. | CUE Output : A = A max<br>CTL Output : C1, C2 ≧ 220mV |
| TEST | TP505 (Audio LCD Board)<br>TP107 (Servo Board) |
| ADJUST | Screw F (A/C Head) |
| MODE | PLAY |
| TAPE | (NTSC)VFM3580KM(No.1 : 14~22min)<br>(PAL)VFM3680KM(No.1 : 14~22min) |
| M.EQ | Oscilloscope, VFK1148 (Hex Driver) |

1. Playback the CUE portion(6kHz) of the Alignment tape.
2. Push the tape to the **direction J** or **K** and confirm that the **TP505** level is not increased.
3. If it is increased, make "A/C Head Azimuth Adjustment" again.







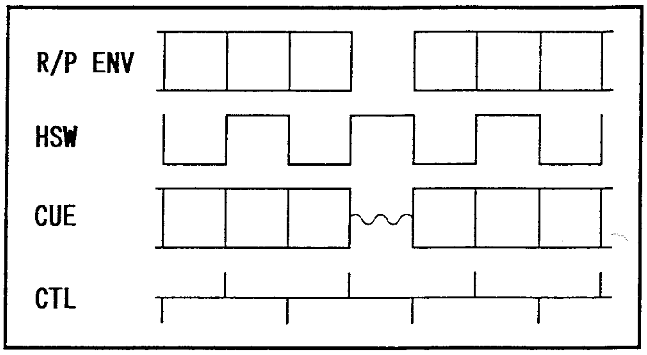


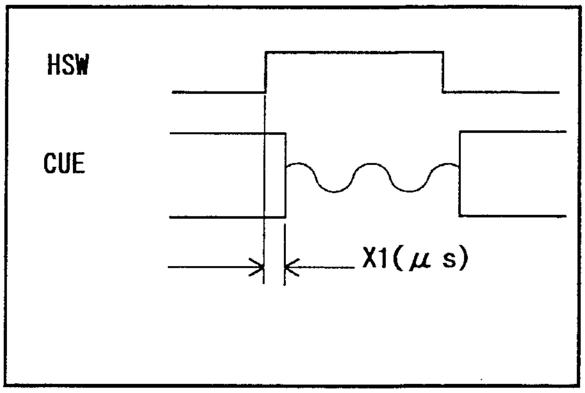
A/C HEAD HEIGHT

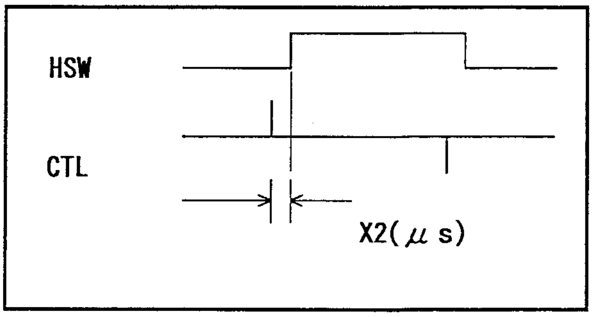
## 1-31. X Value Adjustment

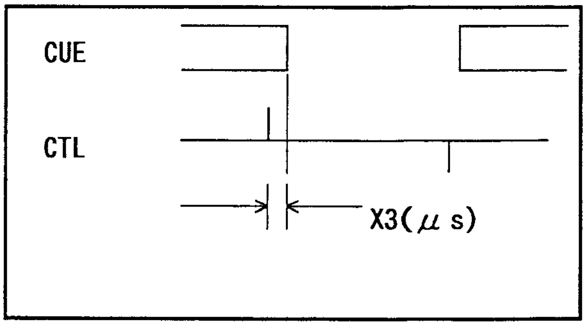
| | |
|---|---|
| **SPEC.** | -250μs ≦ X1, X2, X3 ≦ 250μs |
| **TEST** | TP500 : R/P ENV (RF Board)<br>TP300 : HSW (RF Board)<br>TP505 : CUE (Audio LCD Board)<br>TP107 : CTL (Servo Board) |
| **ADJUST** | A/D Head |
| **MODE** | PLAY(ATF control) |
| **TAPE** | (NTSC) VFM3582KM (X Value)<br>(PAL) VFM3682KM (X Value) |
| **M.EQ** | Oscilloscope,<br>VFK0357 (Eccentric Driver), Hex driver |

1. Adjust **A/C Head Azimuth** so that the CTL and lack part of CUE are match in the phase.
2. Confirm the lack track of R/P envelope and select the HSW correspond with it (The lack track corresponds to Lch(HSW : High)).
3. Adjust CUE phase (**X Value**) so that the lack part of CUE and selected HSW are match in the phase. [To adjust X Value, loosen the **screws C** and **D**. Adjust the **hole E** and then tighten the **screws C** and **D** with **2.5kg** torque.]
4. Adjust the **Azimuth** at the same time so that the relation between the CTL and CUE is kept.
5. Confirm that X1, X2 and X3 are within specification.

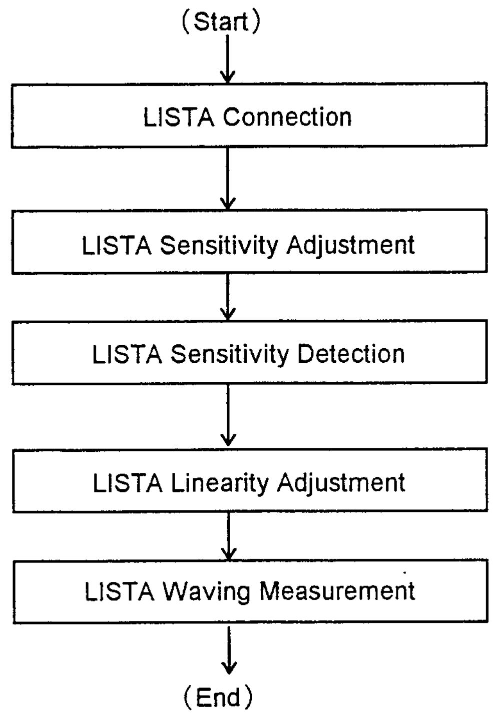








## 1-32. Linearity Adjustment Flowchart


(Start)
LISTA Connection
LISTA Sensitivity Adjustment
LISTA Sensitivity Detection
LISTA Linearity Adjustment
LISTA Waving Measurement
(End)

## 1-33. LISTA Connection

| | |
|---|---|
| **BOARD** | Servo |
| **TEST** | TP115 : ATF Error (Servo Board)<br>TP113 : HSW_R (Servo Board)<br>TG300 : GND (Servo Board) |
| **TAPE** | VFM3581KM(No.2 : LISTA master)<br>VFM3681KM(No.2 : LISTA master) |
| **M.EQ** | LISTA |

1. Confirm that the power is turned off and make a short-circuit between **TP902** and **TP116**.
2. Connect LISTA cable between A/D board and the test points as shown in table above.
3. Execute LISTA∗∗E.EXE. (∗∗ is a software version.)
4. Select **"<2>AJ-D700"** menu in the LISTA menu.
5. Select the number of the alignment tape. If the alignment tape data is not entered, input the data written on the enclosed paper into PC manually.

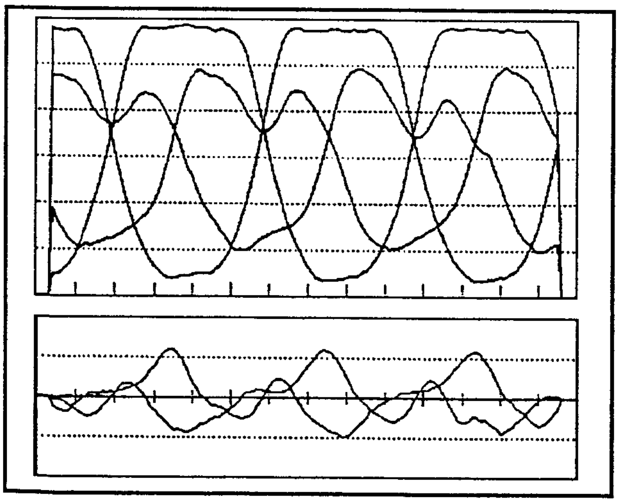
## 1-34. LISTA Sensitivity Adjustment

| | |
|---|---|
| **BOARD** | Servo |
| **SPEC.** | Sensitivity : 100 ± 10 (mV/μm) |
| **TEST** | TP115 : ATF Error (Servo Board)<br>TP113 : HSW_R (Servo Board)<br>TG300 : GND (Servo Board) |
| **ADJUST** | ATF Gain (EVR) |
| **MODE** | +1.2% Playback |
| **TAPE** | VFM3581KM(No.2 : LISTA master)<br>VFM3681KM(No.2 : LISTA master) |
| **M.EQ** | LISTA, EVR |

**EVR Setting**

CMD : 02 DATA : 55 ADR : **0C** (ATF GAIN)

1. Set up the EVR tool according to item 2-3.EVR Setting of Electrical Adjustments.
2. Confirm that the power is turned off and make a short-circuit between **TP902** and **TP116** to place the unit in +1.2% Playback mode.
3. Playback an alignment tape.
4. Select **<6>ATF Error Signal Monitor** menu and display the sensitivity data.
5. Press the [→] or [←] key in PC so that the sensitivity value which is described as **Sens. Value** is within specification.
6. After the adjustment, press ESC key to exit to the menu.



## 1-35. LISTA Sensitivity Detection

| | |
|---|---|
| **BOARD** | Servo |
| **SPEC.** | Sensitivity : 100 ± 10 (mV/μm) |
| **TEST** | TP115 : ATF Error (Servo Board)<br>TP113 : HSW_R (Servo Board)<br>TG300 : GND (Servo Board) |
| **MODE** | +1.2% Playback |
| **TAPE** | VFM3581KM(No.2 : LISTA master)<br>VFM3681KM(No.2 : LISTA master) |
| **M.EQ** | LISTA |

1. Confirm that the power is turned off and make a short-circuit between **TP902** and **TP116** to place the unit in +1.2% Playback mode.
2. Playback an alignment tape.
3. Select **<1>Sensitivity Measurement** menu and start the sensitivity detection.
4. Confirm that the sensitivity value is within specification.
5. If out of specification, repeat the steps 3 and 4.
6. If still out of specification, make "LISTA Sensitivity Adjustment again.

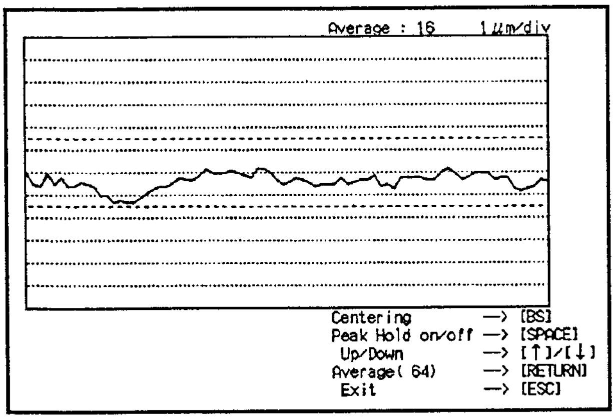
## 1-36. LISTA Linearity Adjustment

| | |
|---|---|
| **BOARD** | Servo |
| **SPEC.** | Linearity : Less than 3µm |
| **TEST** | TP115 : ATF Error (Servo Board)<br>TP113 : HSW_R (Servo Board)<br>TG300 : GND (Servo Board) |
| **ADJUST** | S1, T1 Post Height |
| **MODE** | LISTA mode |
| **TAPE** | VFM3581KM(No.2 : LISTA master)<br>VFM3681KM(No.2 : LISTA master) |
| **M.EQ** | LISTA, VFK1149 (Post Driver) |

1. Confirm that the power is turned off and make a short-circuit between **TP902, TP116** and **TP101** to place the unit in LISTA mode.
2. Playback an alignment tape.
3. Select **<2>Linearity Measurement** menu, and display the linearity.
4. Adjust the **S1 post height** and **T1 post height** so that the linearity is within specification.

**Note.**

1. Lower part of the monitor shows the lead.
2. Current linearity is red line.



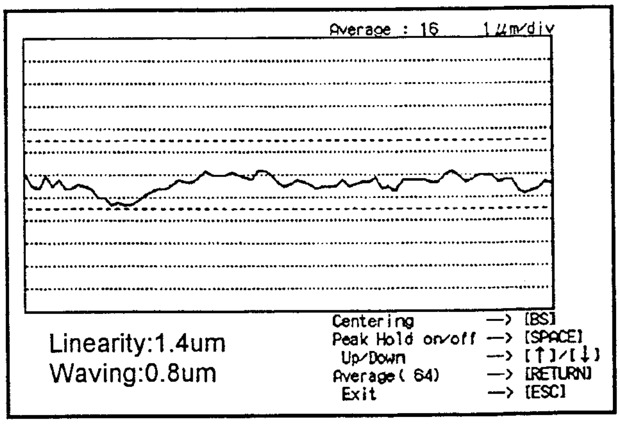
## 1-37. LISTA Waving Measurement

| | |
|---|---|
| **BOARD** | Servo |
| **SPEC.** | Waving : Less than 1.5µm |
| **TEST** | TP115 : ATF Error (Servo Board)<br>TP113 : HSW_R (Servo Board)<br>TG300 : GND (Servo Board) |
| **ADJUST** | S1, T1 Post Height |
| **MODE** | LISTA mode |
| **TAPE** | VFM3581KM(No.2 : LISTA master)<br>VFM3681KM(No.2 : LISTA master) |
| **M.EQ** | LISTA, VFK1149 (Post Driver) |

1. Confirm that the power is turned off and make a short-circuit between **TP902, TP116** and **TP101** to place the unit in LISTA mode.
2. Playback an alignment tape.
3. Select **<2>Linearity Measurement** menu, and display the linearity.
4. After linearity is displayed, press the SPACE key to hold the peak (Peak-Hold) during 30 seconds.
5. After Peak-Hold, press the SHIFT key and } key together to display the measurement value and confirm that the value is within specification.
6. After the adjustment, press ESC key to exit to the menu.

**Note.**

1. Confirm that waving value is almost same from the entrance to the exit.
2. If out of specification because of wrong post limits, adjust the S1 and T1 posts again.

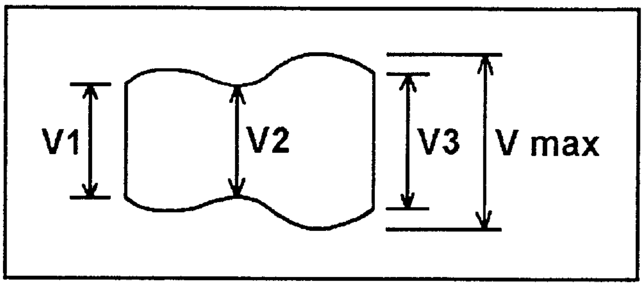


Linearity:1.4um
Waving:0.8um

## 1-38. Linearity Confirmation

|  |  |
|---|---|
| **SPEC.** | V1/Vmax, V2/Vmax, V3/Vmax ≧ 0.8 |
| **TEST** | TP500(RF Board) |
| **MODE** | PLAY(ATF) |
| **TAPE** | Blank Tape |
| **M.EQ** | Oscilloscope, VFK1149 (Post Driver) |

1. Record the color bar signal.
2. Play back the recorded portion and confirm that the envelope output is within specification.



# SECTION 4

# ELECTRICAL ADJUSTMENTS

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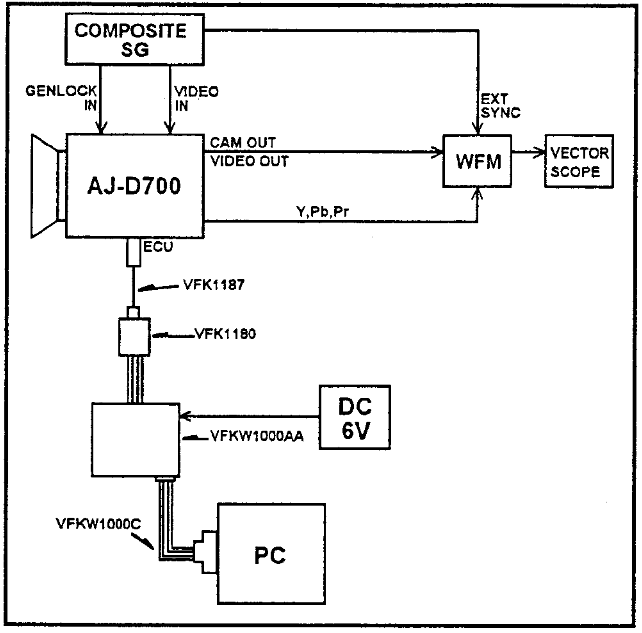
# 1. Camera Section

## Setup of EVR Tool

1. Turn the power switches of the camera recorder and the EVR OFF.
2. Connect the tools as shown in figure.



3. Turn the power of PC and EVR ON and then camera recorder ON.
4. Pressing [SHIFT],[+] and [-] buttons in operation panel, set the MENU SW to SET.
5. Press the PAGE button to open the SERVICE ADJ. menu. Select EVR in ECU CONNECT. After setting turn the MENU OFF.
6. Execute the CAM_TOOL.EXE to start EVR program.
7. Follow the displayed instructions until MAIN MENU is shown. (If the bar graph stops before 100% and MAIN MENU is not opened, turn the power of I/F box (VFKW1000AA) OFF and ON. Then excute the EVR program again.)
8. Select < 1. BACK UP (DOWN LOAD) RAM DATA> and back up the current data. (If some problem occured while adjusting and previous data is required, select < 2. RESTORE (UP LOAD) RAM DATA >.)

**MAIN MENU**

1. BACK UP (DOWN LOAD) RAM DATA.
2. RESTORE (UPLOAD) RAM DATA.
3. PREPARATION OF ADJUSTMENT.
4. START ADJUSTMENT.
5. ELECTRICAL ADJUSTMENT.
6. E.V.R. DIRECT FUNCTIONS.
7. BACK UP (DOWN LOAD) RAM DATA. < OPTION >
8. RESTURE (UPLOAD) RAM DATA < OPTION >

8. Select < 6. E.V.R. DIRECT FUNCTIONS >.
9. Select <1. COMMAND INPUT FUNCTION >.

**1. COMMAND INPUT FUNCTION**

**[ E.V.R. FUNCTION ]**

COMMAND : [00]
DATA : 00
ADDRESS : 00

**[ MACRO FUNCTION ]**

| | | |
|---|---|---|
| 1. | CAMERA RESET No.1. | [F1] . [A] |
| 2. | CAMERA RESET No.2 | [F1] . [B] |
| 3. | VF OUT. | [F1] . [C] |
| 4. | MONITOR OUT LEVEL. | [F2] . [0] |

« Page Up: INC Page Down DEC »

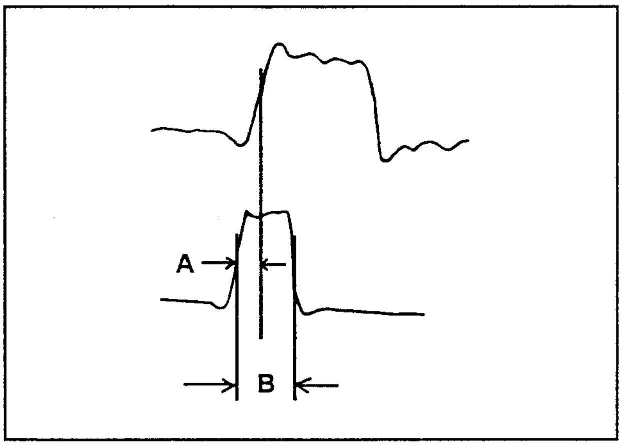
10. Follow each adjustment procedure.

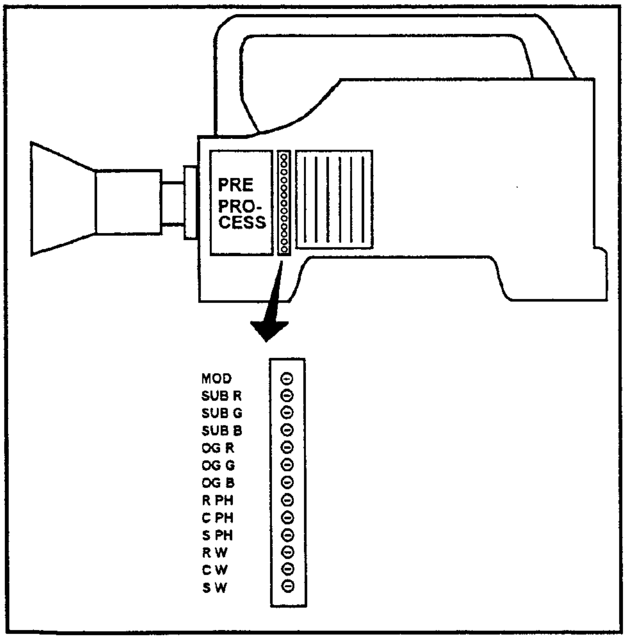
**Note:**
1. After operating EVR, turn the VTR off and on.
2. Following menus are not completed. Do not use them.
   - 3. PREPARATION OF ADJUSTMENT.
   - 4. START ADJUSTMENT.
   - 5. ELECTRICAL ADJUSTMENT.
   - 7. BACK UP (DOWN LOAD) RAM DATA <OPTION>.
   - 8. RESTURE (UPLOAD) RAM DATA <OPTION>.
   - 2. MACRO FUNCTION <6. E.V.R. DIRECT FUNCTIONS >.
3. When the SYSCON PROM is updated, execute the CAMERA RESET No.1 in COMMAND INPUT FUNCTION menu. Press the [F1] and [A] keys together, and then press [ENTER] key.

## 1-1. Reset Pulse Adjustment

| | |
|---|---|
| **BOARD** | Pulse |
| **SPEC.** | (NTSC) A:5.0±1ns, B:10.0±1ns<br>(PAL) A:5.0±1ns, B:10.0±1ns |
| **TEST** | TP1(R),TP3(H2) |
| **ADJUST** | VR1(R PH),VR4(R W) |
| **M.EQ** | Oscilloscope |

1. Remove the camera unit.
2. Adjust the **VR4** so that the pulse width B at the **TP1** is within specification.
3. Adjust the **VR1** so that the phase difference A is within specification.(Trigger : TP3)





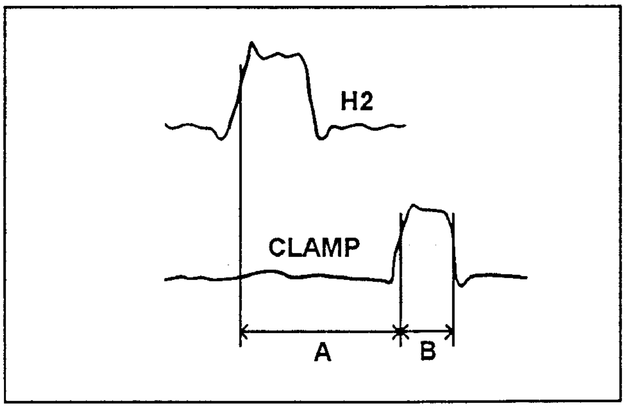
## 1-2. Clamp Pulse Adjustment

| | |
|---|---|
| **BOARD** | Pulse |
| **SPEC.** | (NTSC) A:37.5±1ns , B:19.0±1ns<br>(PAL) A:39±1ns, B:17±1ns |
| **TEST** | TP3002(CDS Board),TP3 |
| **ADJUST** | VR2(C PH),VR5(C W) |
| **M.EQ** | Oscilloscope |

1. Adjust the **VR5** so that the pulse width B(TP3002) is within specification.
2. Adjust the **VR2** so that the phase difference A is within specification.(Trigger : TP3)

**Note.**

1. If the adjustment is not completed even after the VR is fully turned, keep the VR where it is.(left end or right end)



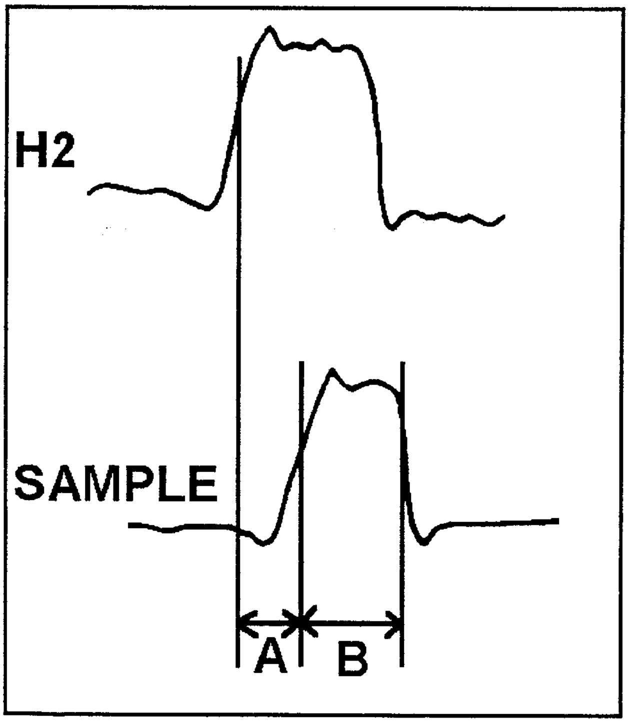
## 1-3. Sample Pulse Adjustment

| | |
|---|---|
| **BOARD** | Pulse |
| **SPEC.** | (NTSC) A:25.0±1ns, B:16.0±1ns<br>(PAL) A:27.5±1ns, B:16±1ns |
| **TEST** | TP3001(CDS Board), TP3 |
| **ADJUST** | VR3(S PH), VR6(S W) |
| **M.EQ** | Oscilloscope |

1. Adjust the **VR6** so that the pulse width B(TP3001) is within specification.
2. Adjust the **VR3** so that the phase difference A is within specification.(Trigger : TP3)

**Note.**

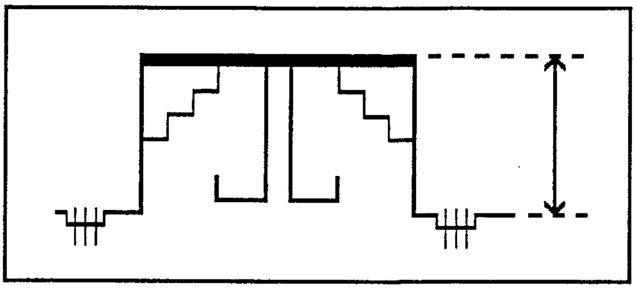
1. If the adjustment is not completed even after the VR is fully turned, keep the VR where it is.(left end or right end)



## 1-4. Reset DC Adjustment

| | |
|---|---|
| **BOARD** | Pulse |
| **TEST** | TP3203(CDS Board) |
| **ADJUST** | VR13(R DC), VR8 (SUB G) |
| **F.NBR.** | Open |
| **CHART** | Grayscale Chart |
| **M.EQ** | Oscilloscope |

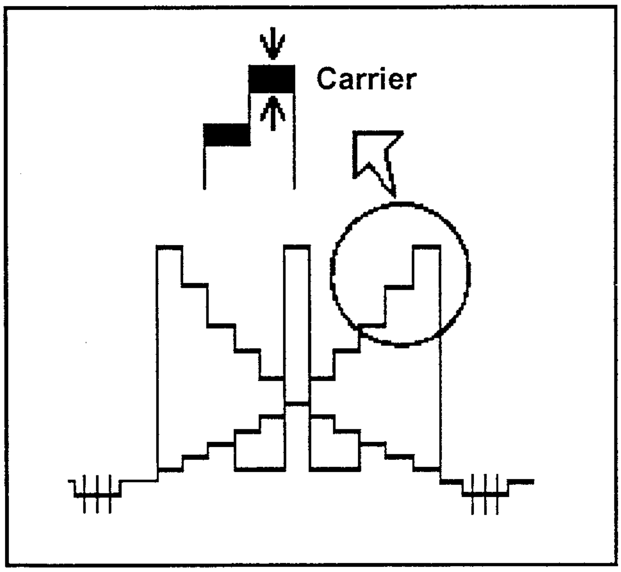
1. Turn the **VR8** counterclockwise fully so that the saturation level depends on R DC.
2. Turn the **VR8** colockwise until the saturation level depends on SUB.
3. Adjust the **VR13** so that the waveform level is maximized.
4. Install the camera unit again.



## 1-5. Carrier Leak Adjustment

| | |
|---|---|
| **BOARD** | CDS |
| **TEST** | TP103(R), TP203(G), TP303(B) |
| **ADJUST** | VC101(R), VC201(G), VC301(B) |
| **F.NBR.** | F8 (2000LUX) |
| **CHART** | Grayscale Chart |
| **M.EQ** | Oscilloscope, Lux Meter |

1. Monitor the **TP103** and adjust the **VC101** so that the carrier leak is minimized.
2. Monitor the **TP203** and adjust the **VC201** so that the carrier leak is minimized.
3. Monitor the **TP303** and adjust the **VC301** so that the carrier leak is minimized.

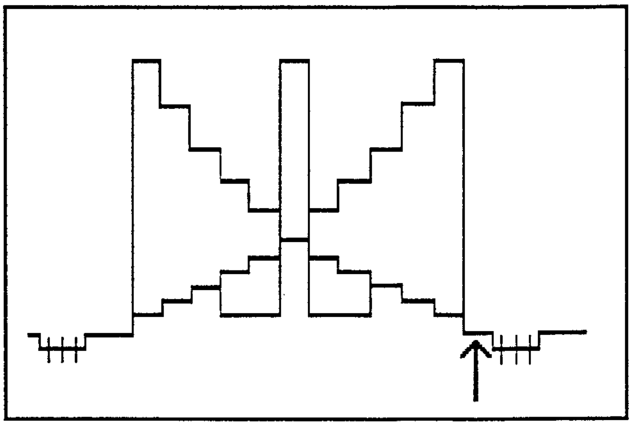


## 1-6. CDS OUT DC Adjustment

| | |
|---|---|
| **BOARD** | CDS |
| **SPEC.** | 150±50mV |
| **TEST** | TP103(R), TP203(G), TP303(B) |
| **ADJUST** | VR102(R), VR202(G), VR302(B) |
| **F.NBR.** | F8 |
| **CHART** | Grayscale Chart |
| **M.EQ** | Oscilloscope |

1. Monitor the **TP103** and adjust the **VR102** so that the black level is within specification.
2. Monitor the **TP203** and adjust the **VR202** so that the black level is within specification.
3. Monitor the **TP303** and adjust the **VR302** so that the black level is within specification.

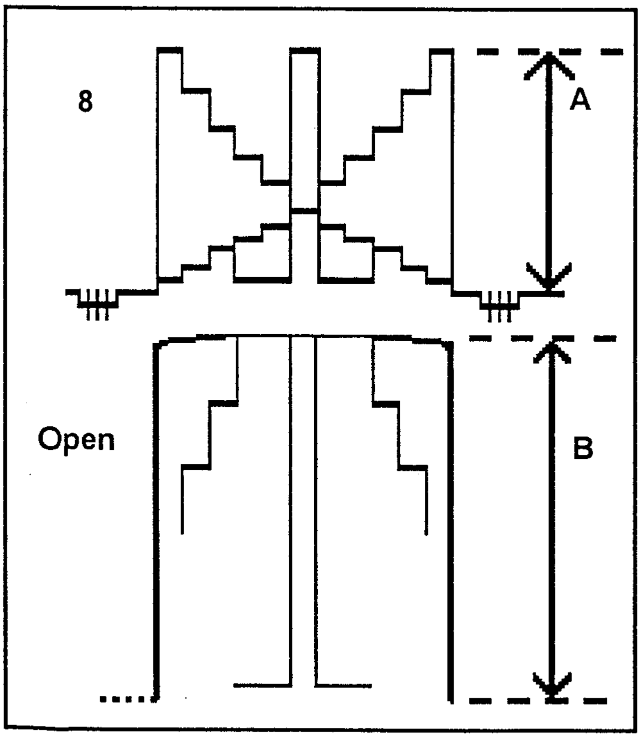
Note.
1. In case that it is difficult to recognize the black level, close the iris.
2. Monitor the center of the carrier because there is carrier on the black level.



## 1-7. SUB Voltage Adjustment 1

| | |
|---|---|
| **BOARD** | Pulse |
| **SPEC.** | B/A = 4±0.2 |
| **TEST** | TP103, TP203, TP303(CDS), TP4 |
| **ADJUST** | VR7(R), VR8(G), VR9(B), VR13(R DC) |
| **F.NBR.** | F8 (2000LUX),Open |
| **CHART** | Grayscale Chart |
| **M.EQ** | Oscilloscope |

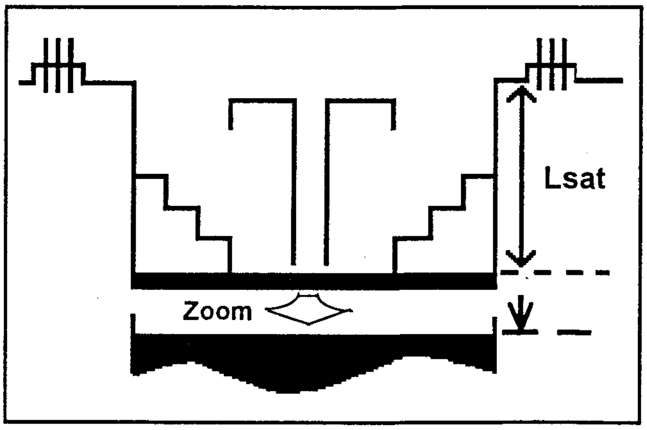
1. Monitor the **TP203**(G) on the CDS Board and measure the level A in IRIS F8.
2. Measure the level B in IRIS open.
3. Adjust the **VR8**(SUB-G) so that the B/A ratio is within specification.
4. Adjust the **VR13** so that the level B is maximized.(Exceeding specification is no problem if the voltage at **TP4** is more than 1.7V.)
5. Repeat 1 to 4 to adjust G ch.
6. Monitor the **TP103**(R) and adjust the **VR7** in the same way. (Do not adjust VR13.)
7. Monitor the **TP303**(B) and adjust the **VR9** in the same way. (Do not adjust VR13.)
8. After the adjustment confirm the CDS OUT DC adjustment again.



## 1-8. SUB Voltage Adjustment 2

| | |
|---|---|
| **BOARD** | Pulse |
| **SPEC.** | 2600±50mV |
| **TEST** | TP2, TP202, TP402(Pre Process) |
| **ADJUST** | VR7(R), VR8(G), VR9(B) |
| **F.NBR.** | Open(2000LUX) |
| **CHART** | Grayscale Chart |
| **M.EQ** | Oscilloscope |

1. Monitor the **TP2** on the Pre Process Board and adjust the **VR7** so that the voltage Lsat is within specification.
2. Monitor the **TP202** on the Pre Process Board and adjust the **VR8** so that the voltage Lsat is within specification.
3. Monitor the **TP402** on the Pre Process Board and adjust the **VR9** so that the voltage Lsat is within specification.



## 1-9. SUB Voltage Confirmation

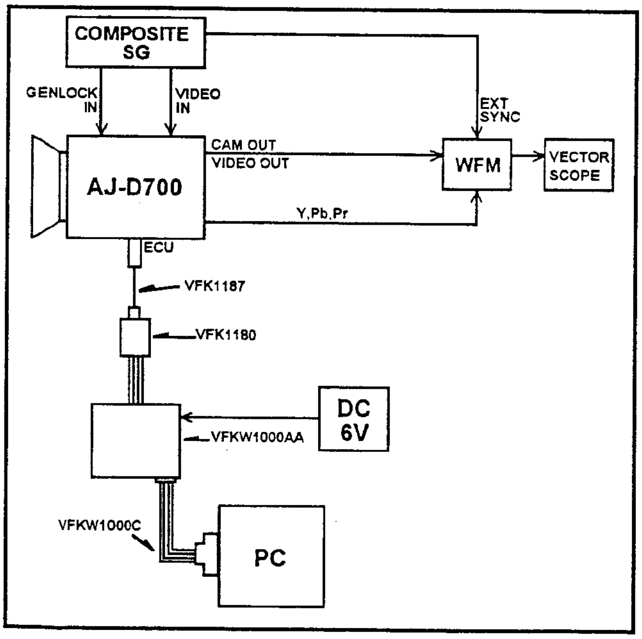
| | |
|---|---|
| **BOARD** | Pulse |
| **TEST** | VIDEO OUT(75 Ω terminated) |
| **ADJUST** | VR7(R), VR8(G), VR9(B) |
| **M.EQ** | Color Monitor TV, 500W Halogen Lamp |

1. Shoot the halogen lamp so that it is one tenth as large as the size of monitor.
2. Confirm that the blooming part has no color.
3. If that part has some color, do SUB Voltage Adjustment1 and 2.

# 2. Video Main and DSP

## 2-1. Initial Setting

1. Set the Camera Recorder as follows:
   AUTO W/B BAL:OFF
   SHUTTER :OFF
   GAIN :L
   OUTPUT :BAR
   WHITE BAL :PRE
2. Turn the power switches of the camera recorder and the EVR OFF.
3. Connect the EVR with ECU connector as shown in figure.
4. Turn the power of EVR ON and then camera recorder ON.
5. Pressing [SHIFT],[+] and [-] buttons in operation panel, set the MENU SW to SET.
6. Press the PAGE button to open the SERVICE ADJ. menu. Select EVR in ECU CONNECT. After setting turn the MENU OFF.
7. Excute the CAM_TOOL. EXE to start EVR program. (Refer to Setup of EVR Tool.)


COMPOSITE SG
GENLOCK IN
VIDEO IN
EXT SYNC
CAM OUT
VIDEO OUT
WFM
VECTOR SCOPE
AJ-D700
Y,Pb,Pr
ECU
VFK1187
VFK1180
DC 6V
VFKW1000AA
VFKW1000C
PC

## 2-2. D3.0V Adjustment

| | |
|---|---|
| **BOARD** | Video Main |
| **SPEC.** | 3.15V+0.05V / -0.00V |
| **TEST** | TP9 |
| **ADJUST** | VR5 (Power) |
| **MODE** | REC |
| **M.EQ** | Digital Volt Meter |

1. Adjust the **VR5** on Power board so that the voltage at the **TP9** is within specification.

## 2-3. Ref DC for A/D Adjustment

| | |
|---|---|
| **BOARD** | DSP |
| **SPEC.** | 2.0±0.001V |
| **TEST** | TP6 |
| **ADJUST** | VR1 |
| **M.EQ** | Digital Volt Meter |

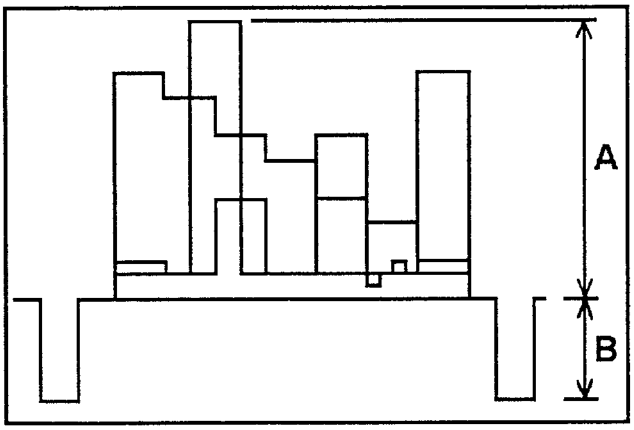
1. Confirm that the DC voltage at **TP6** is within specification, and adjust the **VR1** in case of need.

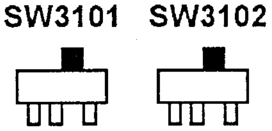
# 3. Encoder

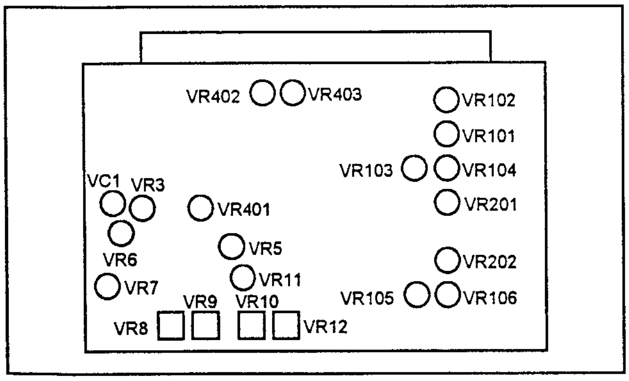
## 3-1. Y & SYNC Levels Adjustment 1

| | |
|---|---|
| **BOARD** | Encoder |
| **SPEC.** | A:1400±28mV, B:600±12mV |
| **TEST** | TP104 |
| **ADJUST** | VR102, VR101, SW101, SW102 |
| **MODE** | Camera Bar |
| **M.EQ** | Waveform Monitor |

1. Confirm that the **SW101** and **SW102** are turned **ON** as shown in figure.
2. Monitor the **TP104** and adjust the **VR102** so that the level A is within specification.
3. Adjust the **VR101** so that the level B is within specification.



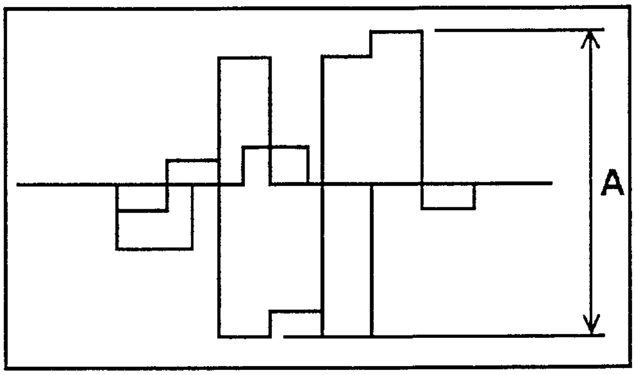

SW3101
SW3102

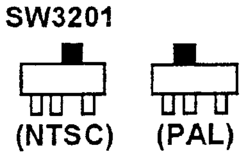

VR402
VR403
VR102
VR101
VR103
VR104
VC1
VR3
VR401
VR201
VR5
VR6
VR202
VR11
VR7
VR9
VR10
VR105
VR106
VR8
VR12

## 3-2. Pr Level Adjustment

| | |
|---|---|
| **BOARD** | Encoder |
| **SPEC.** | (NTSC) 1400±28mV, (PAL) 1050±20mV |
| **TEST** | TP203 |
| **ADJUST** | VR201, SW201 |
| **MODE** | Camera Bar |
| **M.EQ** | Waveform Monitor |

1. Set the **SW201** as shown in figure and adjust the **VR201** so that the level A is within specification.

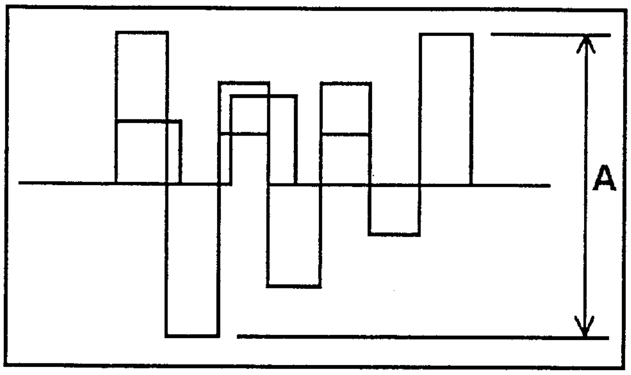


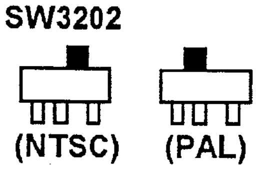

SW3201
(NTSC)
(PAL)

## 3-3. Pb Level Adjustment

| | |
|---|---|
| **BOARD** | Encoder |
| **SPEC.** | (NTSC) 1400±28mV, (PAL) 1050±20mV |
| **TEST** | TP204 |
| **ADJUST** | VR202, SW202 |
| **MODE** | Camera Bar |
| **M.EQ** | Waveform Monitor |

1. Set the **SW202** as shown in figure and adjust the **VR202** so that the level A is within specification.

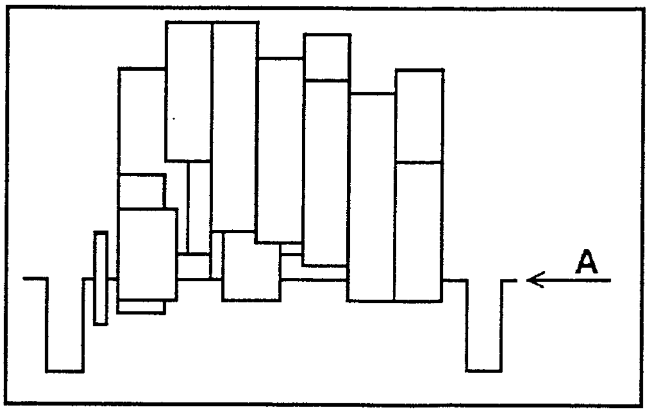




## 3-4. CAM DC Adjustment

| | |
|---|---|
| **BOARD** | Encoder |
| **SPEC.** | 0±10mV |
| **TEST** | CAM OUT |
| **ADJUST** | VR11 |
| **MODE** | Camera Bar |
| **M.EQ** | Waveform Monitor |

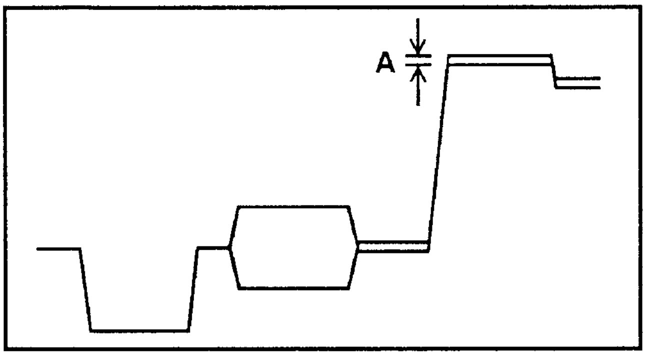
1. Adjust the **VR11** so that the DC voltage is within specification.



## 3-5. Carrier Balance Adjustment

| | |
|---|---|
| **BOARD** | Encoder |
| **SPEC.** | A = Minimum |
| **TEST** | CAM OUT |
| **ADJUST** | VR8, VR9 |
| **MODE** | Camera Bar |
| **M.EQ** | Waveform Monitor |

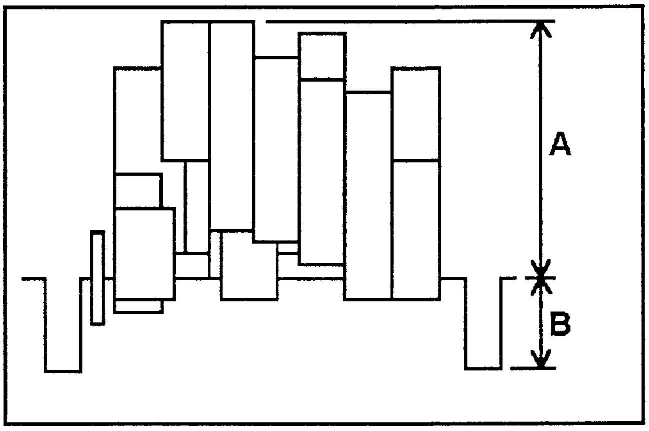
1. Adjust the **VR8** so that the width A is minimized.
2. Adjust the **VR9** as well as **VR8**.
3. Repeat the above steps until the width A is minimized.



## 3-6. Y & SYNC Levels Adjustment 2

| | |
|---|---|
| **BOARD** | Encoder |
| **SPEC.** | (NTSC) A:714±15mV, B:286±6mV<br>(PAL) A:700±14mV, B:300±6mV |
| **TEST** | CAM OUT |
| **ADJUST** | VR12, VR106, VR105 |
| **MODE** | Camera Bar |
| **M.EQ** | Waveform Monitor |

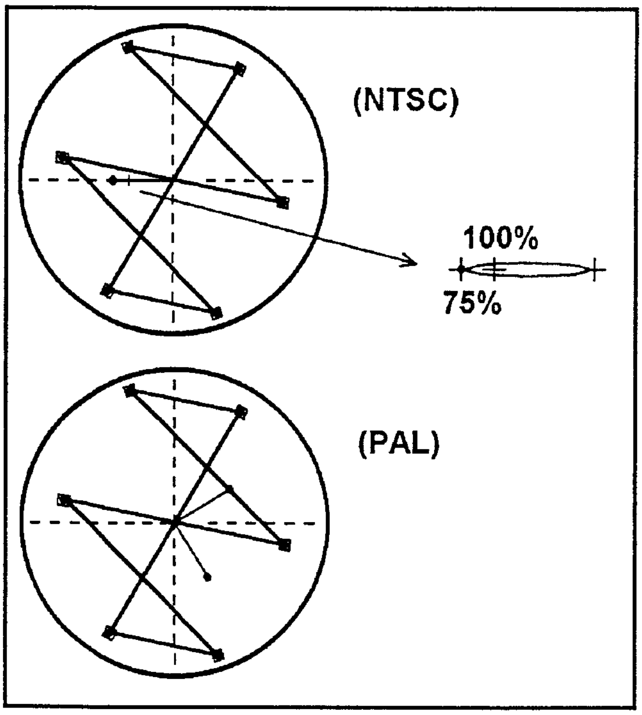
1. Set the **VR12** to **CENTER** position.
2. Adjust the **VR106** so that the level A is within specification.
3. Adjust the **VR105** so that the level B is within specification.



## 3-7. Burst Level & Vector Adjustment

| | |
|---|---|
| **BOARD** | Encoder |
| **TEST** | CAM OUT |
| **ADJUST** | VR6, VR3, VR5, VR7, VC1 |
| **MODE** | Camera Bar |
| **M.EQ** | Vector Scope |

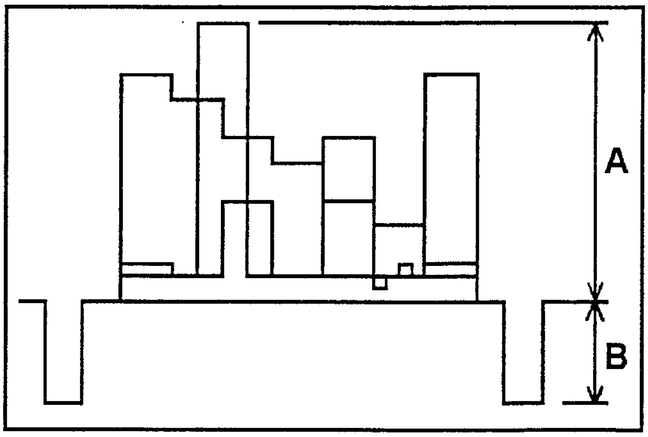
1. Adjust the **VC1** so that both burst levels are the same.
2. Adjust the **VR6** and **VR7** so that both bursts are fixed on scales.



## 3-8. Video Out & Sync Adjustment

| | |
|---|---|
| **BOARD** | Encoder |
| **SPEC.** | (NTSC) A:714±15mV, B:286±6mV<br>(PAL) A:700±14mV, B:300±6mV |
| **TEST** | VIDEO OUT |
| **ADJUST** | VR104, VR103 |
| **MODE** | Camera Bar |
| **M.EQ** | Waveform Monitor, EVR |

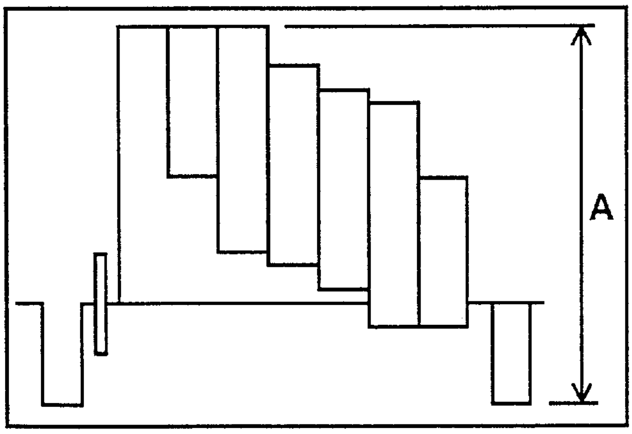
1. Press the [F2] and [0] in EVR and confirm that the EVR display indicates [1E][02][00].
2. Connect the Waveform Monitor with VIDEO OUT and adjust the **VR104** so that the level A is within specification.
3. Adjust the **VR103** so that the level B is within specification.



## 3-9. (NTSC only) Video IN Level Adjustment

| | |
|---|---|
| **BOARD** | Encoder |
| **SPEC.** | A:1V±20mV |
| **TEST** | VIDEO OUT |
| **ADJUST** | VR403 |
| **INPUT** | Color Bar |
| **MODE** | Camera Bar |
| **M.EQ** | Waveform Monitor, EVR |

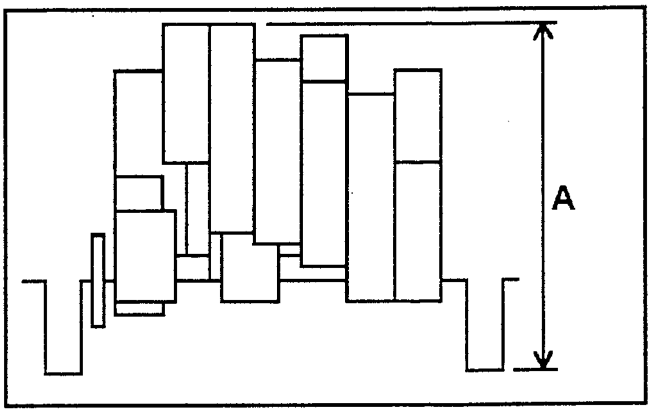
1. Input the color bar to VIDEO IN.
2. Confirm that the EVR display indicates [1E][02][00] and then press the [→] to set the EVR to [1E][03][00]. Otherwise press the [CMD][1E] [DATA][03] [ADR][00] [SET] to input [1E][03][00].
3. Connect the Waveform Monitor with VIDEO OUT and adjust the **VR403** so that the level A is within specification.



## 3-10. Mon Enc Level Adjustment

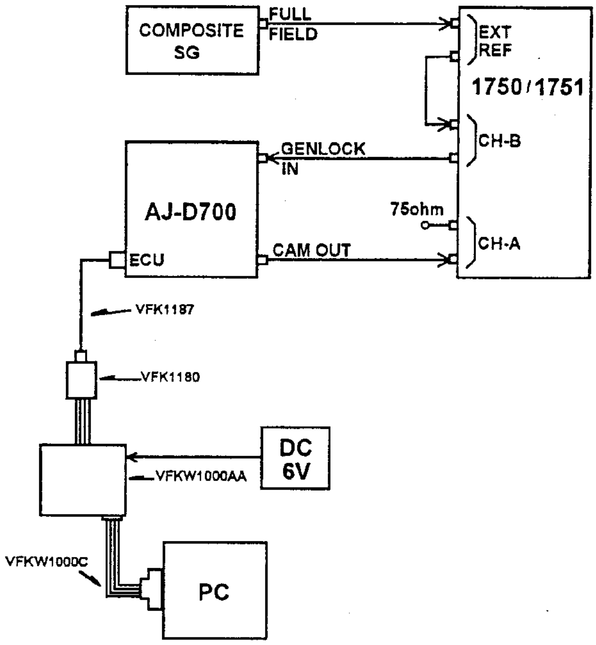
| | |
|---|---|
| **BOARD** | Encoder |
| **SPEC.** | A:1V±20mV |
| **TEST** | VIDEO OUT |
| **ADJUST** | VR401 |
| **MODE** | Camera Bar |
| **M.EQ** | Waveform Monitor, EVR |

1. Confirm that the EVR display indicates [1E][03][00] and then press the [→] to set the EVR to [1E][04][00]. Otherwise press the [CMD][1E] [DATA][04] [ADR][00] [SET] to input [1E][04][00].
2. Connect the Waveform Monitor with VIDEO OUT and adjust the **VR401** so that the level A is within specification.
3. Set the **SW101** and **SW102** to **OFF**.



# 4. Sync

## 4-1. Connection


COMPOSITE SG
FULL FIELD
EXT REF
1750/1751
CH-B
GENLOCK IN
AJ-D700
75ohm
CAM OUT
CH-A
ECU
VFK1187
VFK1180
DC 6V
VFKW1000AA
VFKW1000C
PC

## 4-2. 4fsc VCO Adjustment

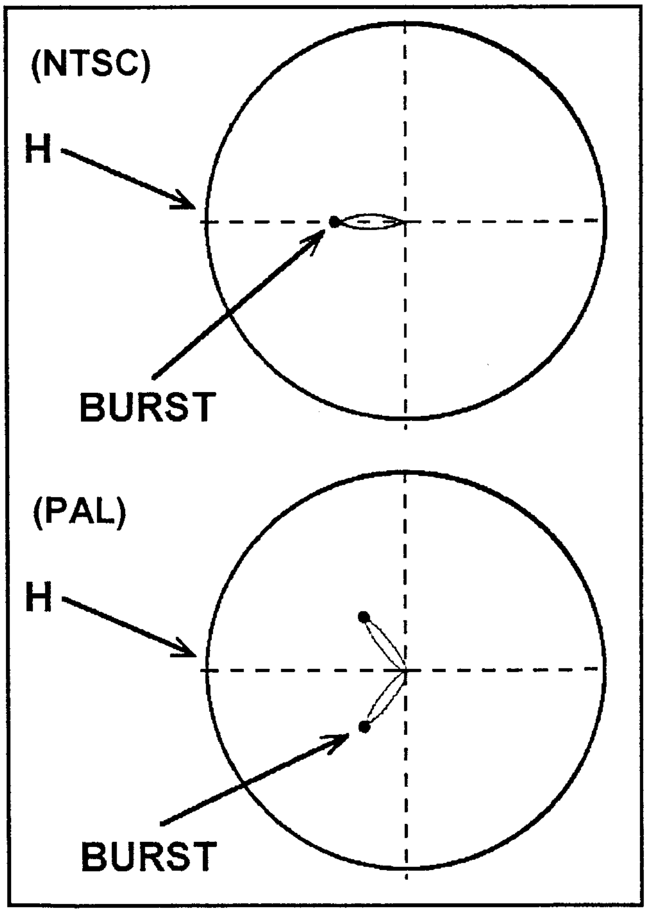
| | |
|---|---|
| **BOARD** | Sync |
| **SPEC.** | (NTSC) 14.31818MHz±10Hz<br>(PAL) 17.734475MHz±10Hz |
| **TEST** | TP17, TP11 |
| **ADJUST** | VR12 |
| **MODE** | Camera Bar |
| **M.EQ** | Oscilloscope, Frequency Counter |

1. Disconnect GEN LOCK IN and adjust the **VR12** so that the frequency at **TP17** is within specification.
2. Input the composite signal to GEN LOCK IN and confirm that the DC voltage at **TP11** is 2.5±0.5V and stable.

## 4-3. SCH Phase Adjustment

| | |
|---|---|
| **BOARD** | Sync |
| **SPEC.** | 0±2° |
| **TEST** | CAM OUT |
| **ADJUST** | VR5 |
| **MODE** | Camera Bar |
| **M.EQ** | SCH Meter |

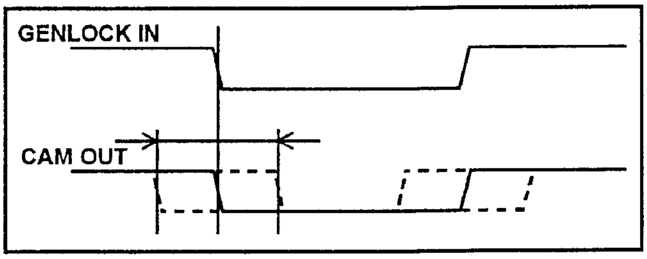
1. Disconnect GEN LOCK IN and set the SCH Meter to INT mode.
2. Adjust the **VR5** so that the SCH is within specification.



## 4-4. System Phase Adjustment 1

| | |
|---|---|
| **BOARD** | Sync |
| **TEST** | CAM OUT |
| **ADJUST** | VR6 |
| **INPUT** | Composite(RS-170A) |
| **MODE** | Camera Bar |
| **M.EQ** | Waveform Monitor, EVR |

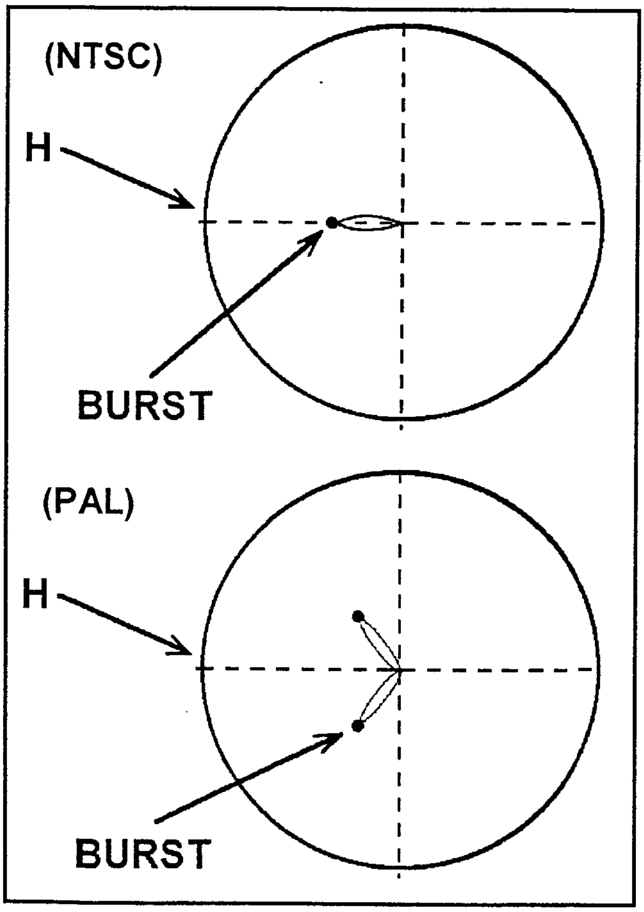
1. Set the Waveform Monitor to EXT mode.
2. Set the EVR to [1E][14][00].
3. Confirm that the composite signal is input to GEN LOCK IN.
4. Adjust the **VR6** so that CAM OUT and GEN LOCK IN are the same in sync phase.



## 4-5. System Phase Adjustment 2

| | |
|---|---|
| **BOARD** | Sync |
| **TEST** | CAM OUT |
| **ADJUST** | VR6, VR7 |
| **INPUT** | Composite(RS-170A) |
| **MODE** | Camera Bar |
| **M.EQ** | SCH Meter, EVR |

1. Set the SCH Meter to EXT mode.
2. Adjust the **VR6** slightly so that CAM OUT and GEN LOCK IN are the same in H phase.
3. Set the EVR to [1E][1C][00].
4. Adjust the **VR7** so that CAM OUT and GEN LOCK IN are the same in burst phase.

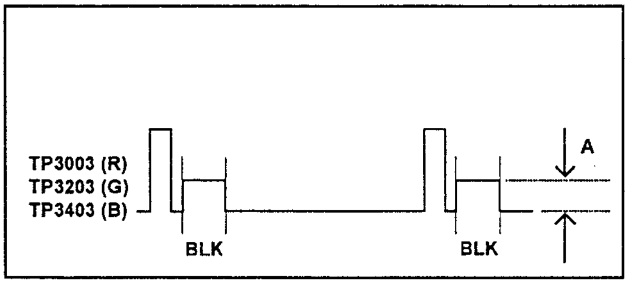


# 5. Pre Process

## 5-1. RGB Pedestal Adjustment

| | |
|---|---|
| **BOARD** | Pre Process |
| **SPEC.** | 0±50mV |
| **TEST** | TP3, TP203, TP403 |
| **ADJUST** | VR1, VR201, VR401 |
| **F.NBR.** | Close |
| **M.EQ** | Oscilloscope, EVR |

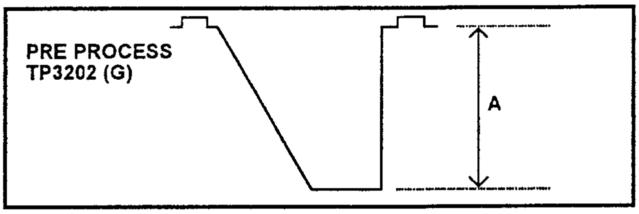
1. Press the [F2] and [2] keys in EVR or input [1E][20][00].
2. Monitor the **TP3** and adjust the **VR1**(R PED) so that the blanking level is flat.
3. Monitor the **TP203** and adjust the **VR201**(G PED) so that the blanking level is flat.
4. Monitor the **TP403** and adjust the **VR401**(B PED) so that the blanking level is flat.
5. Set the EVR to [1E][21][00] and then execute the **ABB** function.



## 5-2. Test Signal Level Adjustment

| | |
|---|---|
| **BOARD** | Pre Process |
| **SPEC.** | 666±10mV |
| **TEST** | TP2(R), TP202(G), TP402(B) |
| **ADJUST** | VR15(R), VR13(G), VR14(B) (Sync) |
| **MODE** | Test Signal |
| **M.EQ** | Oscilloscope, EVR |

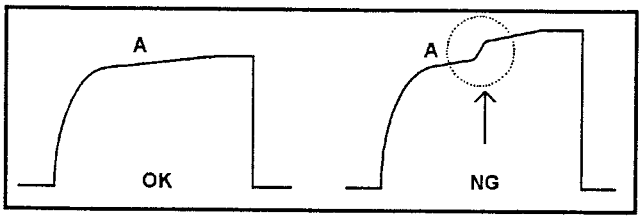
1. Set the EVR to [1E][22][00].
2. Monitor the **TP2** and adjust the **VR15** so that the level A is within specification.
3. Monitor the **TP202** and adjust the **VR13** so that the level A is within specification.
4. Monitor the **TP402** and adjust the **VR14** so that the level A is within specification.



## 5-3. A/D Input Level Adjustment 1

| | |
|---|---|
| **BOARD** | Pre Process |
| **TEST** | VIDEO OUT(75 Ω terminated) |
| **ADJUST** | VR2(R), VR202(G), VR402(B) |
| **MODE** | Test Signal |
| **M.EQ** | Waveform Monitor, EVR |

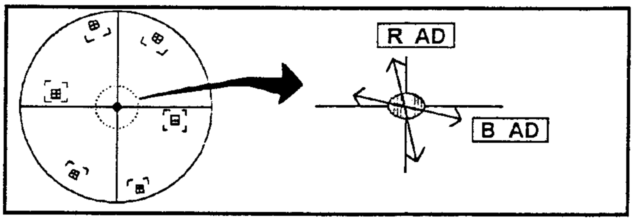
1. Set the EVR to [1E][23][00].(R ch is selected.)
2. Adjust the **VR2** to increase the A/D level and then stop adjusting just before the A portion is uneven.
3. Set the EVR to [1E][24][00].(G ch is selected.)
4. Adjust the **VR202** to increase the A/D level and then stop adjusting just before the A portion is uneven.
5. Set the EVR to [1E][25][00].(B ch is selected.)
6. Adjust the **VR402** to increase the A/D level and then stop adjusting just before the A portion is uneven.



## 5-4. A/D Input Level Adjustment 2

| | |
|---|---|
| **BOARD** | Pre Process |
| **TEST** | CAM OUT(75 Ω terminated) |
| **ADJUST** | VR2(R), VR402(B) |
| **MODE** | Test Signal |
| **M.EQ** | Vector Scope |

2. Set the Vector Scope Gain to MAX.
3. Fineadjust the **VR2** and **402** so that the dot is at the center of the vector scope.



## 5-5. Pedestal Tracking Adjustment

| | |
|---|---|
| **BOARD** | Pre Process |
| **TEST** | CAM OUT(75 Ω terminated) |
| **ADJUST** | VR3(R), VR403(B) |
| **F.NBR.** | Close |
| **M.EQ** | Vector Scope, EVR |

1. Pressing [SHIFT],[+] and [-] buttons in operation panel, set the MENU SW to SET.
2. Press the PAGE button to open the following menus and set to **zero**.
   LEVEL 4/6 :R,G,B FLARE
   :R,B GAMMA
   SERVICE ADJ. :R,B GAMMA
3. Set the EVR to [1E][28][00].
4. Set the Vector Scope to Gain:MAX.
5. Adjust the **VR3** and **VR403** so that the dot is at the center of the vector scope.
6. Press [→] key to set to [1E][29][00]. Confirm that the dot is still at the center of the vector scope.
7. If not, repeat 3,5 and 6.

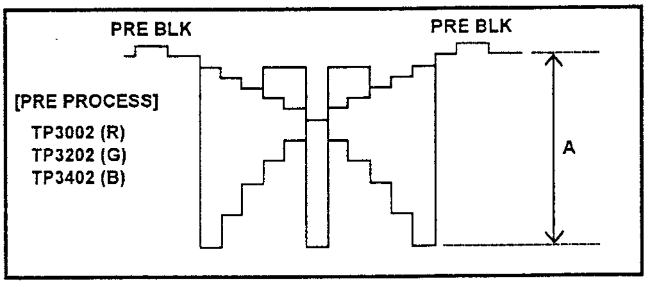
**Note.**

1. Adjust the VR3 to move vertically and the VR403 horizontally.

## 5-6. Sample & Hold Level Adjustment 1

| | |
|---|---|
| **BOARD** | Pre Process |
| **SPEC.** | 666±10mV |
| **TEST** | TP2, TP202, TP402 |
| **ADJUST** | VR101, VR201, VR301(CDS Board) |
| **F.NBR.** | F8(2000LUX), Optical Filter:1 |
| **CHART** | Grayscale Chart(3200°K) |
| **M.EQ** | Oscilloscope,Lux Meter,Color Pyrometer |

1. Set as follows:
   CAM/BAR : CAM(AGAM:ON)
   AWB : PRESET
   GAIN : 0dB
2. Don't use an extender of lens.
3. Set the EVR to [1E][27][00].
4. Monitor the **TP2** and adjust the **VR101**(R LVL) so that the level A is within specification.
5. Monitor the **TP202** and adjust the **VR201**(G LVL) so that the level A is within specification.
6. Monitor the **TP402** and adjust the **VR301**(B LVL) so that the level A is within specification.



## 5-7. Fixed Pattern Noise Confirmation

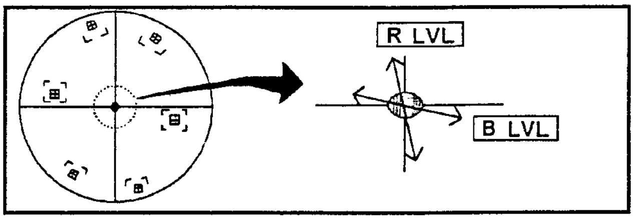
| | |
|---|---|
| **BOARD** | Pulse |
| **TEST** | CAM OUT |
| **ADJUST** | VR3(CCD Pulse) |
| **F.NBR.** | Close |
| **M.EQ** | Monitor TV, EVR |

1. Set the EVR to [1E][36][00](+18dB).
2. Execute the ABB function.
3. Confirm that there is no fixed pattern noise vertically with lense closed.
4. If there is, set the EVR to [1E][37][00] and then adjust the **VR3**, remember the original position of **VR3**, so that the noise is minimized. (If the noise is not decreased, set **VR3** to the original position again.)

## 5-8. Sample & Hold Level Adjustment 2

| | |
|---|---|
| **BOARD** | CDS |
| **TEST** | CAM OUT |
| **ADJUST** | VR101(R LVL), VR301(B LVL) |
| **F.NBR.** | F8 (2000LUX), Optical Filter:1 |
| **CHART** | Grayscale Chart |
| **M.EQ** | Vector Scope,Lux Meter,<br>Color Pyrometer |

1. Set the EVR to [1E][27][00].
2. Set the Vector Scope to Gain:MAX.
3. Adjust the **VR101** and **301** slightly so that the dot is at the center of the vector scope.



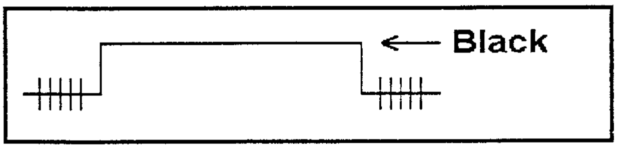
## 5-9. CDS DC Adjustment

| | |
|---|---|
| **BOARD** | CDS |
| **SPEC.** | 150±50mVdc |
| **TEST** | TP103(R), TP203(G), TP303(B) |
| **ADJUST** | VR102(R), VR202(G), VR302(B) |
| **F.NBR.** | Close |
| **M.EQ** | Oscilloscope |

1. Monitor the **TP103** and adjust the **VR102** so that the black level is within specification.
2. Monitor the **TP203** and adjust the **VR202** so that the black level is within specification.
3. Monitor the **TP303** and adjust the **VR302** so that the black level is within specification.

**Note.**

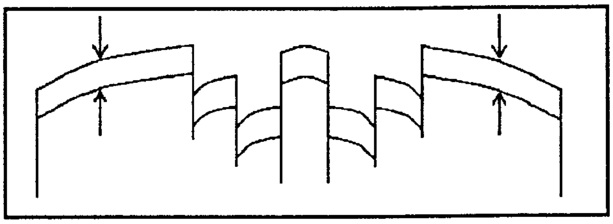
1. Monitor the center of the carrier because there is carrier on the black level.



## 5-10. Carrier Level Adjustment

| | |
|---|---|
| **BOARD** | Pulse |
| **TEST** | CAM OUT |
| **ADJUST** | VR7(SUB R), VR9(SUB B) |
| **CHART** | Grayscale Chart |
| **M.EQ** | Waveform Monitor, EVR |

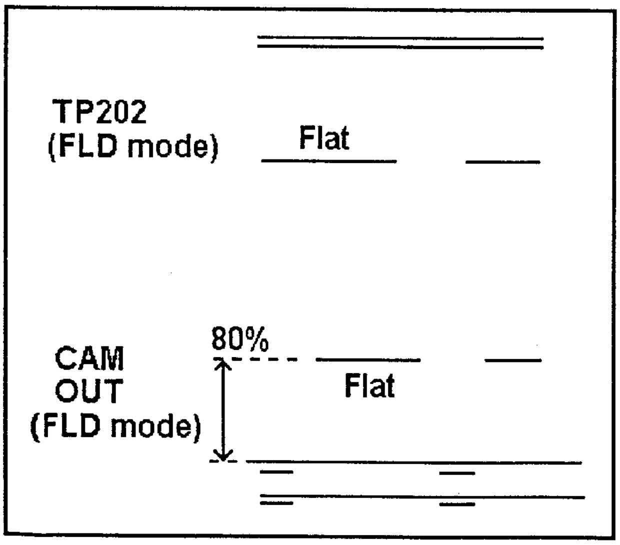
1. Set the EVR to [1E][3A][00].
2. Select PRESET position in AWB mode.
3. Execute the ABB function.
4. Open the iris until upper three steps are saturated in grayscale waveform as shown in figure.
5. Adjust the **VR7** and **VR9** alternately so that the carrier level is minimized. (less than 6IRE)
6. After the adjustment, confirm the CDS DC Adjustment.



## 5-11. Analog White Shading

| | |
|---|---|
| **BOARD** | Pre Process |
| **TEST** | CAM OUT(75 Ω terminated), TP202 |
| **ADJUST** | EVR |
| **M.EQ** | Waveform Monitor, Vector Scope, EVR<br>Lens(Built-in Extender)<br>Light Box(Spherical Type) |

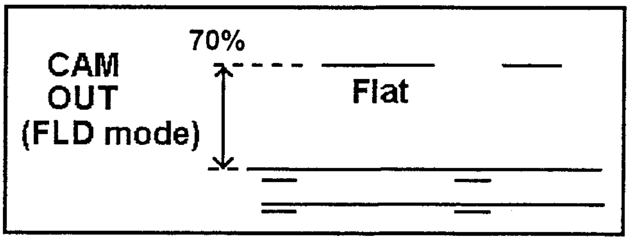
1. Set the EVR to [1E][2E][00].
2. Open the iris until the peak level is 80% in CAM OUT **without extender.**
3. Select A position in AWB mode and execute the AWB function.
4. Execute the ABB function.
5. Adjust the iris to 80% again until the peak level is 80% and execute the AWB function.
6. Set the EVR to [0E][80][0E].
7. Monitor the **TP202** in waveform monitor(field mode) and press [→] or [←] key in EVR so that the waveform is flat.
8. Input [1E][2F][00] in EVR to execute the analog white shading. (While executing, 'ACTIVE' is displayed on EVF.)
9. Execute the AWB function.
10. Monitor the **TP202** in vector scope and confirm that the dot is round and around the center of the scope.
11. Open the iris until the peak level is 80% in CAM OUT **with extender.**
12. Execute the AWB function and repeat 6 to 10.



## 5-12. Digital White Shading

| | |
|---|---|
| **TEST** | CAM OUT(75 Ω terminated) |
| **ADJUST** | EVR |
| **M.EQ** | Waveform Monitor, Vector Scope, EVR<br>Lens(Built-in Extender)<br>Light Box(Spherical Type) |

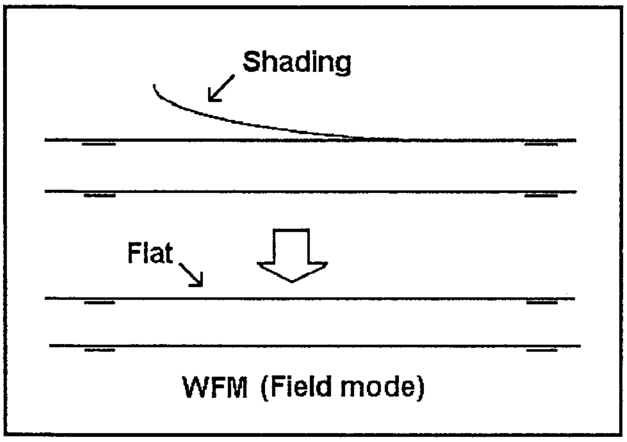
1. Set the EVR to [1E][30][00].
2. Open the iris until the peak level is 70% in CAM OUT **without extender.**
3. Select A position in AWB mode and execute the AWB function.
4. Input [1E][31][00] in EVR to execute the digital white shading. (While executing, '*' or 'ACTIVE' is displayed on EVF.)
5. Execute the AWB function.
6. Monitor the CAM OUT in waveform monitor(field mode) and confirm that the waveform is flat.
7. Monitor the CAM OUT in vector scope and confirm that the dot is round and around the center of the scope.

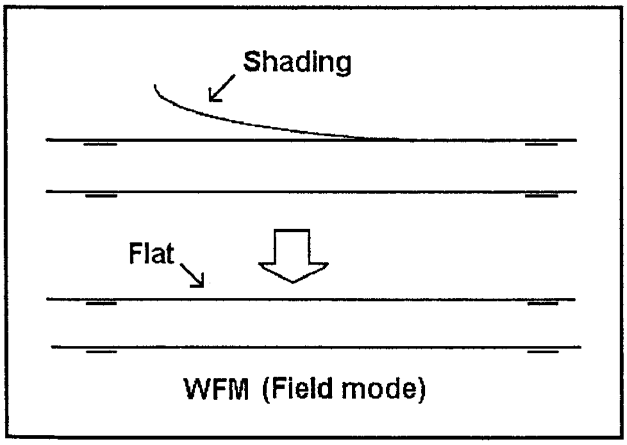


## 5-13. Auto Dark Shading

| | |
|---|---|
| **TEST** | CAM OUT(75 Ω terminated) |
| **ADJUST** | EVR |
| **F.NBR.** | Close |
| **M.EQ** | Waveform Monitor, EVR |

1. Set AWB position to PRE.
2. Execute the ABB function.
3. Input [1E][2A][00] in EVR to confirm executing the auto dark shading.
4. Monitor the CAM OUT in waveform monitor(field mode) and confirm that the waveform is made flat.
5. Confirm that the shading is completed and waveform is flat.

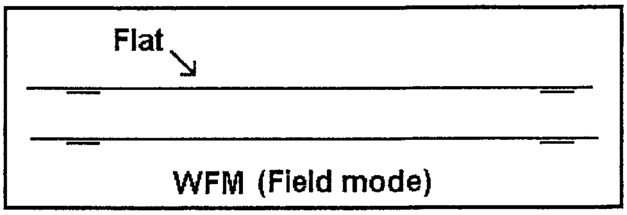




## 5-14. Digital Dark Shading

| | |
|---|---|
| **TEST** | CAM OUT(75 Ω terminated) |
| **ADJUST** | EVR |
| **F.NBR.** | Close |
| **M.EQ** | Waveform Monitor, EVR |

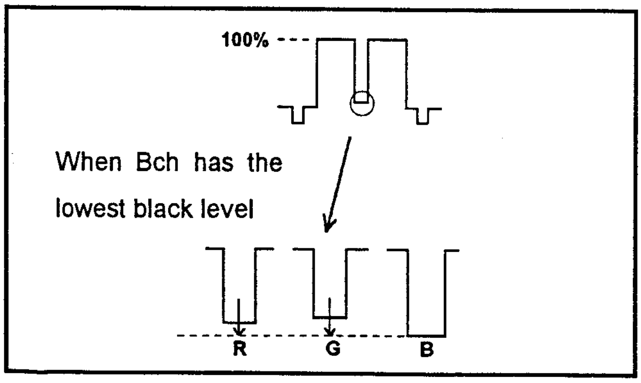
1. Set AWB position to PRE.
2. Input [1E][2B][00] in EVR.
3. Input [1E][2D][00] in EVR to execute the digital dark shading. (While executing, 'ACTIVE' is displayed on EVF.)
4. Monitor the CAM OUT in waveform(field mode) monitor and confirm that the waveform is flat.



## 5-15. Flare Correction Adjustment

| | |
|---|---|
| **TEST** | VIDEO OUT |
| **ADJUST** | EVR |
| **F.NBR.** | (2000LUX) |
| **CHART** | Flare chart |
| **M.EQ** | Waveform Monitor, EVR |

1. Open the iris until white level is 80%.
2. Execute AWB function in the A ch and then ABB function.
3. Adjust the iris again and execute AWB function in the A ch.
4. Open the iris until white level is 100%.
5. Open the iris 1.5 steps more, for example, F8 to F5.6-1/2.
6. Input [1E][32][[00] in EVR to select Rch and measure the black level.
7. Input [1E][33][[00] in EVR to select Gch and measure the black level.
8. Input [1E][34][[00] in EVR to select Bch and measure the black level.
9. Don't adjust the channel which has the lowest black level.
10. Adjust the black levels of other two channels to the level of the channel mentioned above No.9 with EVR. The ways to change the black levels are as shown below.
    (R ch) After inputting [1E][32][[00] and then [0E][00][0B], press [→] or [←] key.
    (G ch) After inputting [1E][33][[00] and then [0E][00][0C], press [→] or [←] key.
    (B ch) After inputting [1E][34][[00] and then [0E][00][0D], press [→] or [←] key.



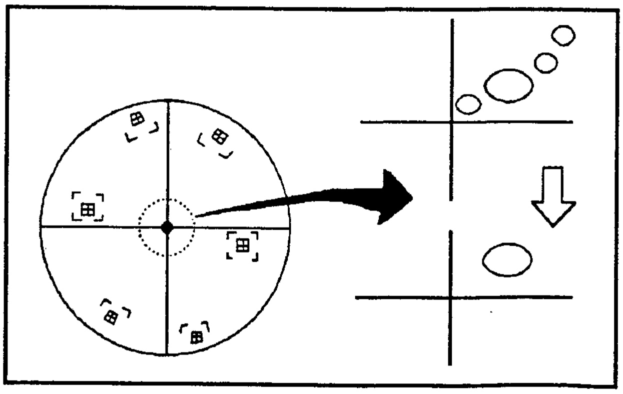
## 5-16. R γ & B γ Adjustment

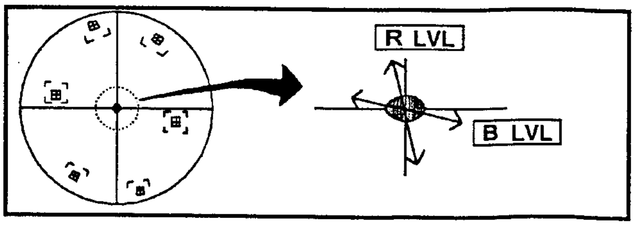
| | |
|---|---|
| **BOARD** | CDS |
| **TEST** | CAM OUT(75 Ω terminated) |
| **ADJUST** | VR101(R LVL), VR301(B LVL), EVR |
| **F.NBR.** | (2000LUX) |
| **CHART** | Grayscale Chart(3200°K) |
| **M.EQ** | Vector Scope, Lux Meter,<br>Color Pyrometer, EVR |

1. Set the Vector Scope to Gain:MAX.
2. Input [1E][27][00] in EVR.
3. Select PRESET position in AWB mode.
4. Execute the ABB function.
5. Open the iris until the peak level is 100% in CAM OUT **without extender**. Confirm that the iris No. is F8 to F8-1/2.
6. When the dot is divided, adjust the R γ and B γ with EVR according to the following procedure so that the dots are joined.
    **R γ** : After inputting [0E][00][09] in EVR, press the [→] or [←] to adjust.
    **B γ** : After inputting [0E][00][0A] in EVR, press the [→] or [←] to adjust.
7. Confirm that the dot is at the center of the vector scope. If not, adjust the **VR101**(R LVL) and **VR301**(B LVL).

**Note.**

1. Vertically divided : Adjust R γ
   Horizontally divided : Adjust B γ

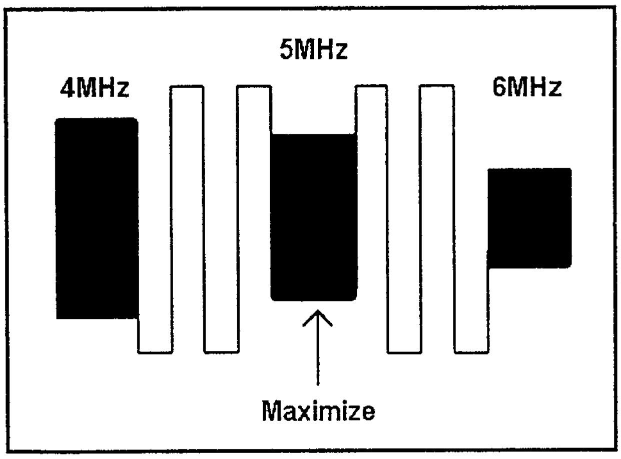




## 5-17. (NTSC only) Modulation Adjustment

| | |
|---|---|
| **BOARD** | Pulse |
| **SPEC.** | MAX at 5MHz |
| **TEST** | CAM OUT (75 Ω terminated) |
| **ADJUST** | VR14(MOD) |
| **CHART** | Modulation Chart |
| **M.EQ** | Waveform Monitor, EVR |

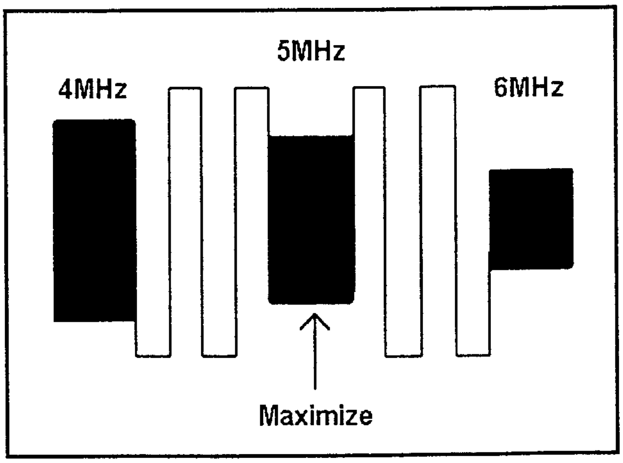
1. Press the [F2] and [3] keys to set the EVR to [1E][35][00].
2. Open the iris until white level is 80%.
3. Execute AWB function in the A ch.
4. Turn the **VR14** counterclockwise fully.
5. Turn the **VR14** clockwise until the level at 5MHz is maximized first.



## 5-18. (PAL only) Modulation Adjustment

| | |
|---|---|
| **BOARD** | Pulse, Sync sub |
| **SPEC.** | MAX at 5MHz |
| **TEST** | CAM OUT (75 Ω terminated) |
| **ADJUST** | VR14(MOD)(Pulse)<br>VR1, VR2, VR3(Sync sub) |
| **CHART** | Modulation Chart |
| **M.EQ** | Waveform Monitor, EVR |

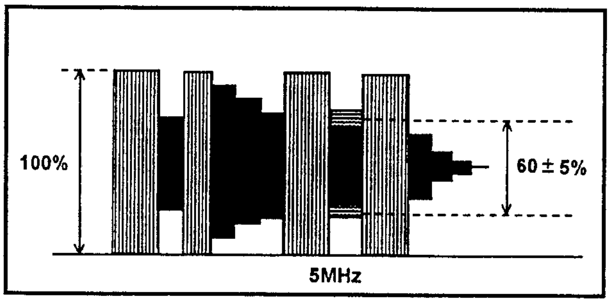
1. Turn the **VR14** fully counterclockwise.
2. Set Gain SW to L.
3. Press the [F2] and [3] keys to set the EVR to [1E][35][00].
4. Open the iris until white level is 80%.
5. Execute AWB function in the A ch.
6. Open the iris until white level is 90%.
7. Turn the **VR1**(Sync sub) counterclockwise fully.
8. Turn the **VR1** clockwise until the level at 5MHz is maximized first.
9. Set shutter to 1/2000.
10. Set Gain SW to M.
11. Repeat from 6 to 8 with **VR2**(Sync sub).
12. Set Gain SW to H.
13. Repeat from 6 to 8 with **VR3**(Sync sub).
14. Set shutter OFF and Gain L.



## 5-19. (PAL only) Modulation Confirmation

| | |
|---|---|
| BOARD | Pulse |
| SPEC. | 60±5% at 5MHz |
| TEST | CAM OUT (75 Ω terminated) |
| ADJUST | VR2(CLMP PH)(Pulse) |
| CHART | Modulation Chart |
| M.EQ | Waveform Monitor, EVR |

1. Press the [F2] and [3] keys to set the EVR to [1E][35][00].
2. Open the iris until white level is 80%.
3. Execute AWB function in the A ch.
4. Open the iris F5.6~F4.
5. Confirm that the level at 5MHz is within specification.
6. If not, fineadjust the **VR2**. When **VR2** is adjusted, Open the iris until white level is 80% and execute AWB function in the A ch.
7. Confirm that the level at 5MHz is within specification. ( 60±10% is accepted only when **VR2** is fully-turned.)
8. When **VR2** is adjusted, repeat from Modulation Adjustment.
9. Finally set the EVR to [1E][3A][00].



# 6-1.Video I/F

## 6-1. Audio VCO Adjustment

| | |
|---|---|
| **BOARD** | Video Main |
| **SPEC.** | A=B±5% |
| **TEST** | TP8 (VCO ADJ.) |
| **ADJUST** | EVR |
| **INPUT** | Internal Color Bar |
| **MODE** | EE |
| **M.EQ** | Oscilloscope |

**Menu Setting**

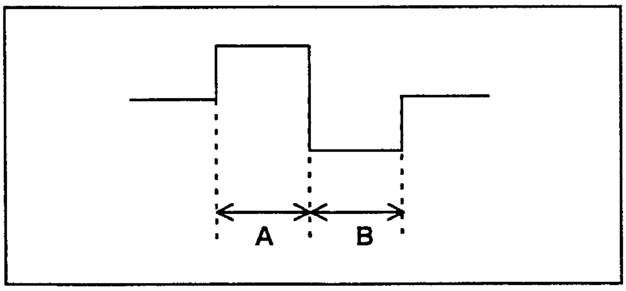
1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:

PAGE : MAIN FUNCTION
REC SIGNAL :**CAM** (NTSC only)
PAGE : SERVICE ADJ.
ECU CONNECT :EVR
IF ADJ. :OFF

**EVR Setting**

CMD : 02 DATA : 82 ADR : **04**

1. Press [→] or [←] key in EVR so that A equals to B.



## 6-2. (NTSC only) Video Input Level Adjustment

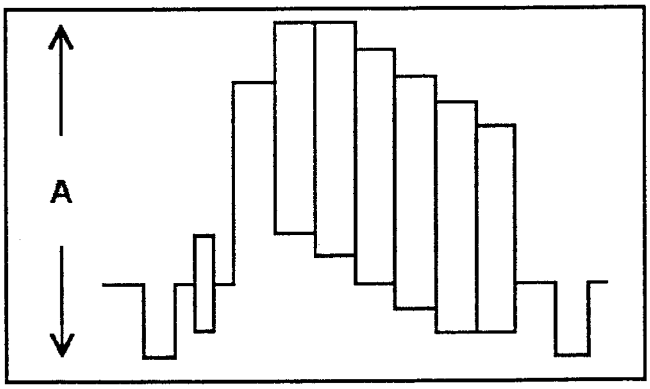
| | |
|---|---|
| **BOARD** | Video I/F |
| **SPEC.** | 2.3±0.05V |
| **TEST** | TP1(AD CPS) |
| **ADJUST** | VR1(CPS LEV) |
| **INPUT** | Color Bar |
| **MODE** | EE |
| **M.EQ** | Oscilloscope |

**Menu Setting**

1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:

PAGE : MAIN FUNCTION
REC SIGNAL :VIDEO
PAGE : SERVICE ADJ.
ECU CONNECT :EVR
IF ADJ. :OFF

1. Input the color bar signal to VIDEO IN connector and adjust the **VR1** so that the level A is within specification.



## 6-3. (NTSC only) APC Adjustment

| | |
|---|---|
| **BOARD** | Video I/F |
| **SPEC.** | 14318180±40Hz |
| **TEST** | TP2(4FSC) |
| **ADJUST** | EVR |
| **INPUT** | No Burst |
| **MODE** | EE |
| **M.EQ** | Frequency Counter |

**Menu Setting**

1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:

PAGE : MAIN FUNCTION
REC SIGNAL :VIDEO
PAGE : SERVICE ADJ.
ECU CONNECT :EVR
IF ADJ. :OFF

**EVR Setting**

CMD : 02 DATA : 9C ADR : **1C**

1. Input the composite signal(without Burst) to VIDEO IN.
2. Press [→] or [←] key in EVR so that the frequency at the **TP2** is within specification.

## 6-4. (NTSC only) Out Bias Adjustment

| | |
|---|---|
| **BOARD** | Video I/F |
| **SPEC.** | B=A±3% |
| **TEST** | TP207(AD PB) |
| **ADJUST** | EVR |
| **INPUT** | Color Bar |
| **MODE** | EE |
| **M.EQ** | Oscilloscope |

**Menu Setting**

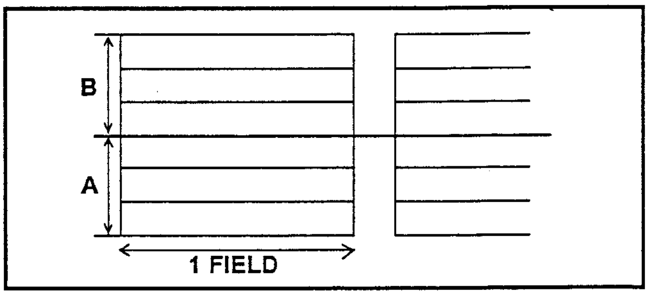
1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:

PAGE : MAIN FUNCTION
REC SIGNAL :VIDEO
PAGE : SERVICE ADJ.
ECU CONNECT :EVR
IF ADJ. :OFF

**EVR Setting**

CMD : 02 DATA : 8D ADR : **1A**

1. Monitor the **TP207** and press [→] or [←] key in EVR so that the level A and B are the same.



## 6-5. (NTSC only) Hue Adjustment

| | |
|---|---|
| **BOARD** | Video I/F |
| **SPEC.** | B=A±10% |
| **TEST** | TP207(AD PB) |
| **ADJUST** | EVR |
| **INPUT** | Color Bar |
| **MODE** | EE |
| **M.EQ** | Oscilloscope |

**Menu Setting**

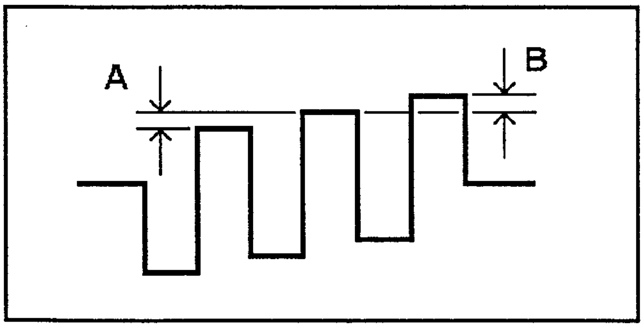
1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:

PAGE : MAIN FUNCTION
REC SIGNAL :VIDEO
PAGE : SERVICE ADJ.
ECU CONNECT :EVR
IF ADJ. :OFF

**EVR Setting**

CMD : 02 DATA : D0 ADR : **19**

1. Monitor the **TP207** and press [→] or [←] key in EVR so that the level A and B are the same.



## 6-6. PLL POS Adjustment

| | |
|---|---|
| **BOARD** | Video I/F |
| **SPEC.** | B=A±10% |
| **TEST** | TP201(HP), TP202(HWIN) |
| **ADJUST** | EVR |
| **INPUT** | Internal Color Bar |
| **MODE** | EE |
| **M.EQ** | Oscilloscope |

**Menu Setting**

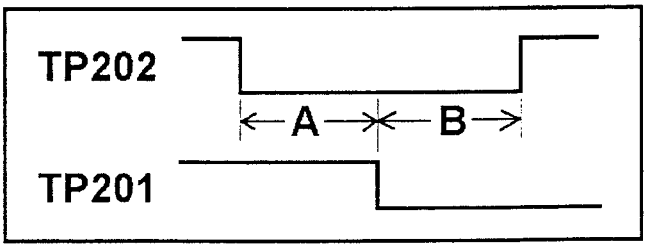
1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:

PAGE : MAIN FUNCTION
REC SIGNAL :**CAM** (NTSC only)
PAGE : SERVICE ADJ.
ECU CONNECT :EVR
IF ADJ. :OFF

**EVR Setting**

CMD : 02 DATA : 77 ADR : **1B**

1. Press [→] or [←] key in EVR so that A equals to B.



## 6-7. (PAL only) ENC Level Adjustment

| | |
|---|---|
| **BOARD** | Video I/F |
| **SPEC.** | A: 700 ± 15mV, B: 300 ± 4mV |
| **TEST** | VIDEO OUT (75 Ω terminated) |
| **ADJUST** | VR602, EVR |
| **MODE** | PLAY |
| **TAPE** | VFM3680KM (0 ~ 10min) |
| **M.EQ** | Waveform Monitor |

**Menu Setting**

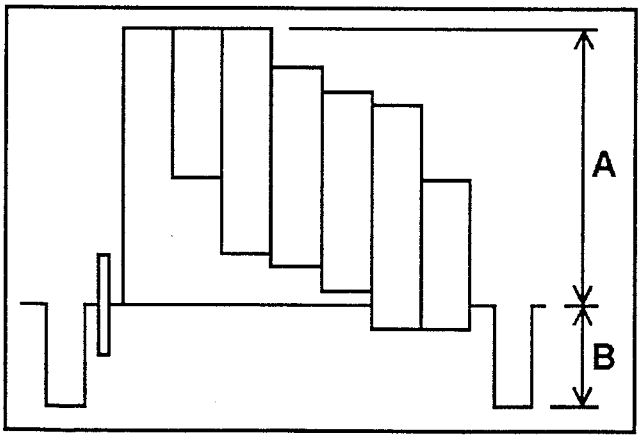
1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:

PAGE : SERVICE ADJ.
ECU CONNECT :EVR
IF ADJ. :OFF

**EVR Setting**

CMD : 02 DATA : 86 ADR : 17

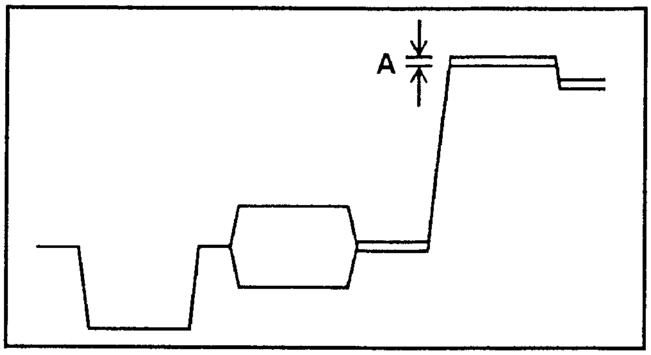
1. Press [→] or [←] key in EVR so that the level **A** is within specification.
2. Adjust the **VR602** so that the level **B** is within specification.



## 6-8. (PAL only) Carrier Balance Adjustment

| | |
|---|---|
| **BOARD** | Video I/F |
| **SPEC.** | A ≦ 10mV |
| **TEST** | VIDEO OUT (75 Ω terminated) |
| **ADJUST** | VR609 (PR), VR610 (PB) |
| **MODE** | PLAY |
| **TAPE** | VFM3680KM (0 ~ 10min) |
| **M.EQ** | Waveform Monitor, Vector Scope |

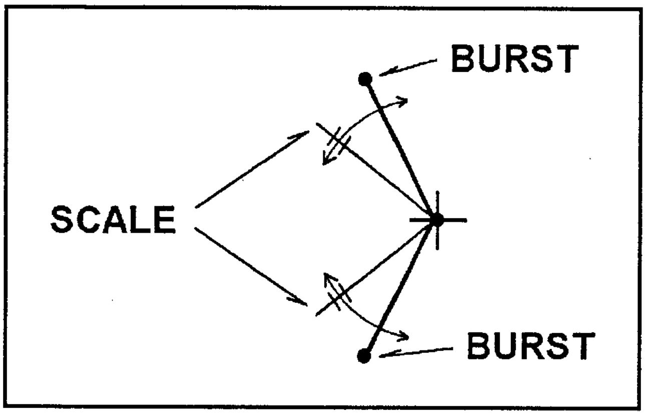
1. Adjust the **VR609** and **VR610** so that the dot is at the center of the vector scope.
2. Adjust the **VR609** so that the width A is minimized.
3. Adjust the **VR610** as well as **VR609**.
4. Repeat the above steps until the width **A** is within specification.



## 6-9. (PAL only) Burst Phase Adjustment

| | |
|---|---|
| **BOARD** | Video I/F |
| **TEST** | VIDEO OUT (75 Ω terminated) |
| **ADJUST** | VR608 |
| **MODE** | PLAY |
| **TAPE** | VFM3680KM (0 ~ 10min) |
| **M.EQ** | Vector Scope |

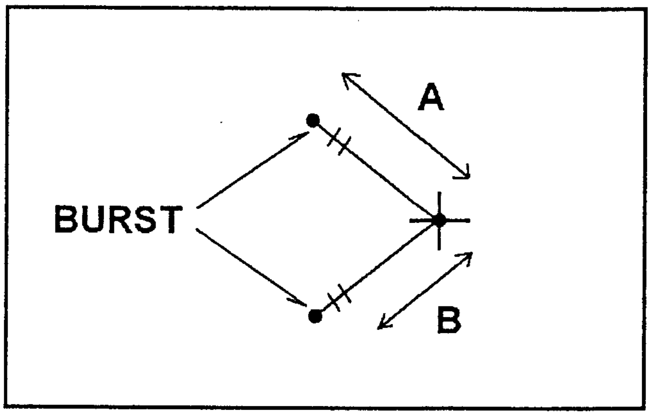
1. Adjust the **VR608** so that the burst vectors are fixed on scale.



## 6-10. (PAL only) QUAD Adjustment

| | |
|---|---|
| **BOARD** | VIDEO I/F |
| **TEST** | VIDEO OUT (75 Ω terminated) |
| **ADJUST** | VC601 |
| **MODE** | PLAY |
| **TAPE** | VFM3680KM (0 ~ 10min) |
| **M.EQ** | Vector Scope |

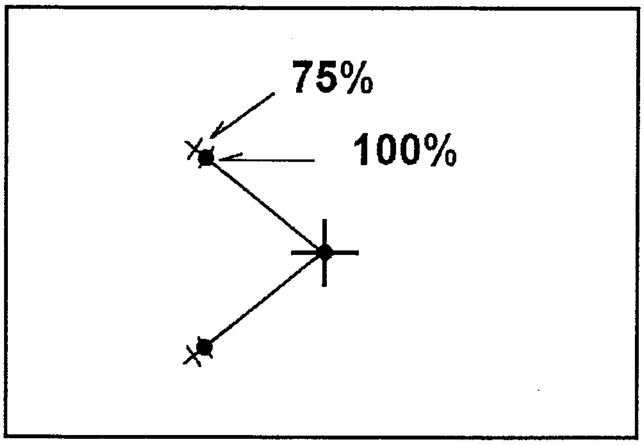
1. Adjust the **VC601** so that the burst level **A** and **B** are the **same**.



## 6-11. (PAL only) Burst Level Adjustment

| | |
|---|---|
| **BOARD** | Video I/F |
| **SPEC.** | 100% |
| **TEST** | VIDEO OUT (75 Ω terminated) |
| **ADJUST** | VR607 |
| **MODE** | PLAY |
| **TAPE** | VFM3680KM (0 ~ 10min) |
| **M.EQ** | Vector Scope |

1. Adjust the **VR607** so that the burst levels are within specification.



## 6-12. (PAL only) Chroma Level Adjustment

| | |
|---|---|
| **BOARD** | Video I/F |
| **TEST** | VIDEO OUT (75 Ω terminated) |
| **ADJUST** | VR604, EVR |
| **MODE** | PLAY |
| **TAPE** | VFM3680KM (0 ~ 10min) |
| **M.EQ** | Vector Scope |

**Menu Setting**

1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:

PAGE : SERVICE ADJ.
ECU CONNECT :EVR
IF ADJ. :OFF

**EVR Setting**

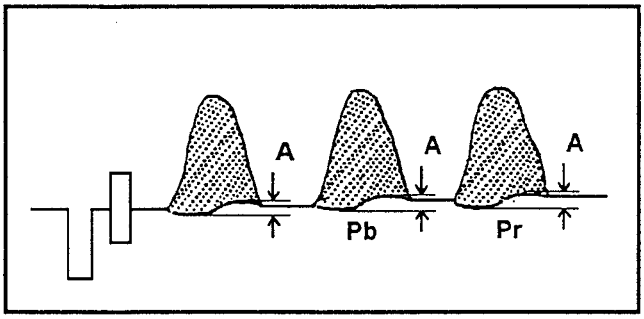
CMD : 02 DATA : 86 ADR : **16**

1. Press [→] or [←] key in EVR so that the R dot is in the marker of the vector scope.
2. If necessary, fineadjust the **VC601**.
3. Adjust the **VR604** so that each dot is in the marker of the vector scope.

## 6-13. (PAL only) Y/C Timing Adjustment

| | |
|---|---|
| **BOARD** | Video I/F |
| **TEST** | VIDEO OUT (75 Ω terminated) |
| **ADJUST** | VR603 (PB), VR605 (PR) |
| **MODE** | PLAY |
| **TAPE** | VFM3680KM (26 ~ 30min) |
| **M.EQ** | Waveform Monitor |

1. Adjust the **VR603** and **VR605** so that the portion A is flat.



## 6-14. Pb Timing Adjustment

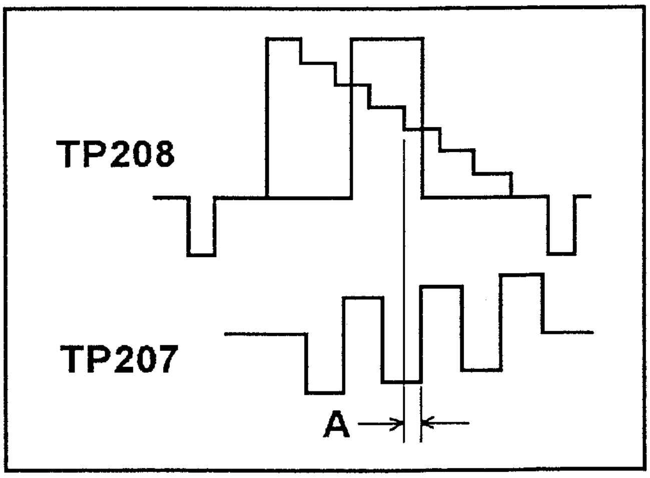
| | |
|---|---|
| **BOARD** | Video I/F |
| **TEST** | TP207(AD PB), TP208(AD Y) |
| **ADJUST** | VR107(PB TMG) |
| **INPUT** | Color Bar, Internal Color Bar |
| **MODE** | EE |
| **M.EQ** | Oscilloscope |

**Menu Setting**

1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:

PAGE : MAIN FUNCTION
REC SIGNAL :**CAM** (NTSC only)
PAGE : SERVICE ADJ.
ECU CONNECT :EVR
IF ADJ. :OFF

1. Adjust the **VR107** so that the phase difference A between **TP207** and **TP208** is within 0±20ns.
2. (NTSC only) Select **VIDEO** in the menu of REC SIGNAL (FUNCTION 3/5).
3. (NTSC only) Confirm that the phase difference A is 0±50ns .



## 6-15. Pr Timing Adjustment

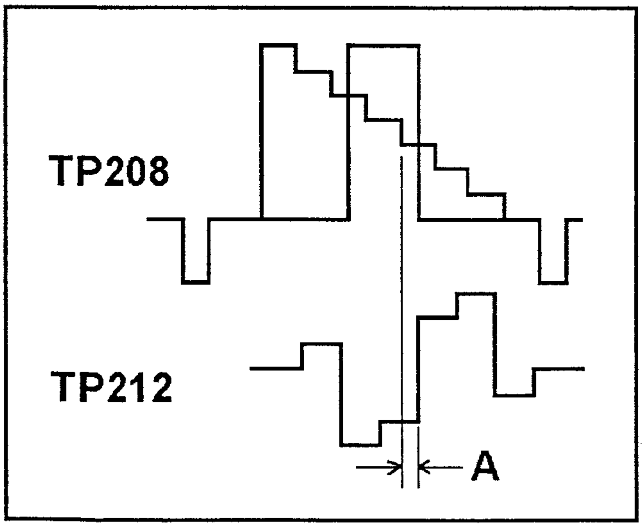
| | |
|---|---|
| **BOARD** | Video I/F |
| **TEST** | TP208(AD Y), TP212(AD PR) |
| **ADJUST** | VR111(PR TMG) |
| **INPUT** | Color Bar, Internal Color Bar |
| **MODE** | EE |
| **M.EQ** | Oscilloscope |

**Menu Setting**

1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:

PAGE : MAIN FUNCTION
REC SIGNAL :**CAM** (NTSC only)
PAGE : SERVICE ADJ.
ECU CONNECT :EVR
IF ADJ. :OFF

1. Adjust the **VR111** so that the phase difference A between **TP212** and **TP208** is within 0±20ns.
2. (NTSC only) Select **VIDEO** in the menu of REC SIGNAL (FUNCTION 3/5).
3. (NTSC only) Confirm that the phase difference A is 0±50ns .



## 6-16. Y Clamp DC Adjustment

| | |
|---|---|
| **BOARD** | Video I/F |
| **TEST** | TP301(Y PED) |
| **ADJUST** | EVR |
| **INPUT** | Internal Color Bar |
| **MODE** | EE |
| **M.EQ** | Oscilloscope |

**Menu Setting**

1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:

PAGE : MAIN FUNCTION
REC SIGNAL :**CAM** (NTSC only)
PAGE : SERVICE ADJ.
ECU CONNECT :EVR
IF ADJ. :OFF

**EVR Setting**

CMD : 02 DATA : 73 ADR : **11**

1. Monitor the **TP301**and press [→] or [←] key in EVR so that the level is about 5 Vdc(flat).
2. If flat 5Vdc does not appear, adjust high level of pulse to 5V.

## 6-17. Y Level Adjustment

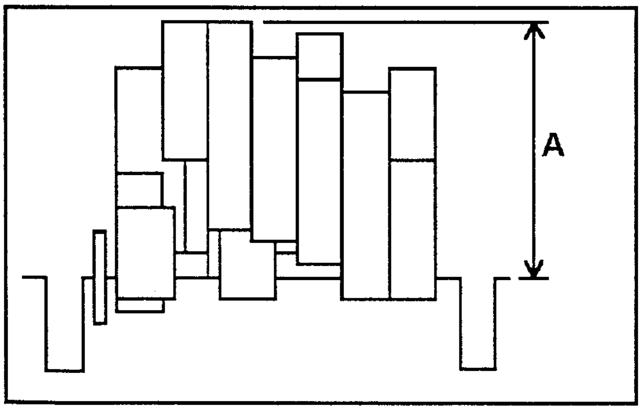
| | |
|---|---|
| **BOARD** | Video I/F |
| **SPEC.** | (NTSC) 714±15mV, (PAL) 700±15mV |
| **TEST** | VIDEO OUT |
| **ADJUST** | VR104(Y LEV) |
| **INPUT** | Internal Color Bar |
| **MODE** | EE |
| **M.EQ** | Waveform Monitor |

**Menu Setting**

1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:

PAGE : MAIN FUNCTION
REC SIGNAL :**CAM** (NTSC only)
PAGE : SERVICE ADJ.
ECU CONNECT :EVR
IF ADJ. :ON

1. Monitor the VIDEO OUT and adjust the **VR104** so that the level A is within specification.



## 6-18. (NTSC only) DEC Y Level Adjustment

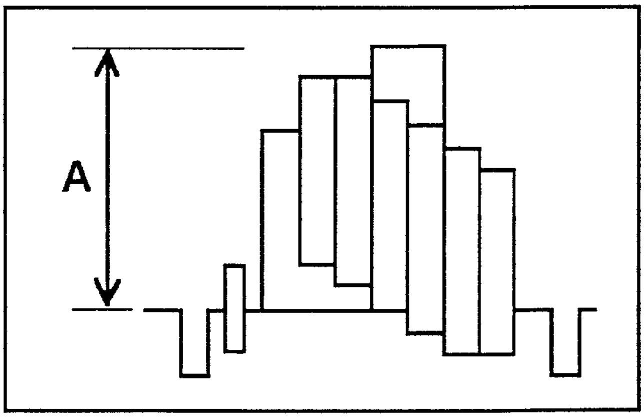
| | |
|---|---|
| **BOARD** | Video I/F |
| **SPEC.** | 714±15mV |
| **TEST** | VIDEO OUT |
| **ADJUST** | VR2(DEC Y LEV) |
| **INPUT** | Color Bar |
| **MODE** | EE |
| **M.EQ** | Waveform Monitor |

**Menu Setting**

1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:

PAGE : MAIN FUNCTION
REC SIGNAL :**VIDEO**
PAGE : SERVICE ADJ.
ECU CONNECT :EVR
IF ADJ. :ON

1. Monitor the VIDEO OUT and adjust the **VR2** so that the level A is within specification.



## 6-19. Vector Adjustment (Camera)

| | |
|---|---|
| **BOARD** | Video I/F |
| **TEST** | VIDEO OUT |
| **ADJUST** | VR108(PB LEV), VR112(PR LEV), EVR |
| **INPUT** | Internal Color Bar |
| **MODE** | EE |
| **M.EQ** | Vector Scope |

**Menu Setting**

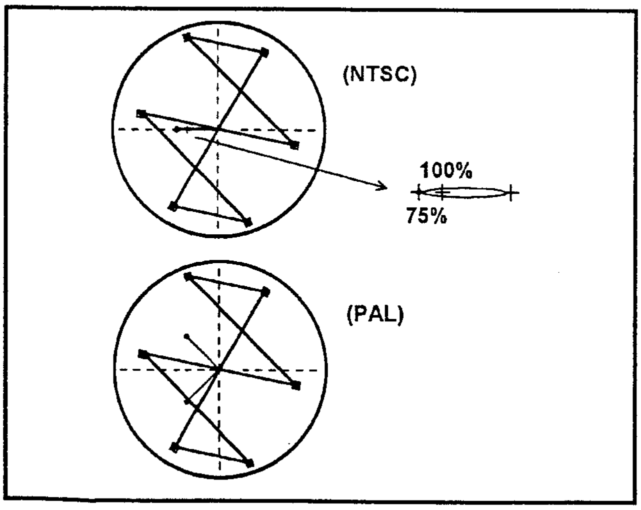
1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:

PAGE : MAIN FUNCTION
REC SIGNAL :**CAM** (NTSC only)
PAGE : SERVICE ADJ.
ECU CONNECT :EVR
IF ADJ. :ON
PAGE : LEVEL 3/6
**SET UP** **:7.5%** (NTSC only)

**EVR Setting**

CMD : 02 DATA : 63 ADR : **12**
CMD : 02 DATA : 63 ADR : **13**

1. Adjust the **VR108** and **VR112** and press [→] or [←] key in EVR so that the vector center is at the center of the vector scope and each dot is in the marker of the vector scope.



## 6-20. (NTSC only) Vector Adjustment (Video)

| | |
|---|---|
| **BOARD** | Video I/F |
| **TEST** | VIDEO OUT |
| **ADJUST** | VR105(PB LEV), VR109(PR LEV), EVR |
| **INPUT** | Color Bar |
| **MODE** | EE |
| **M.EQ** | Vector Scope |

**Menu Setting**

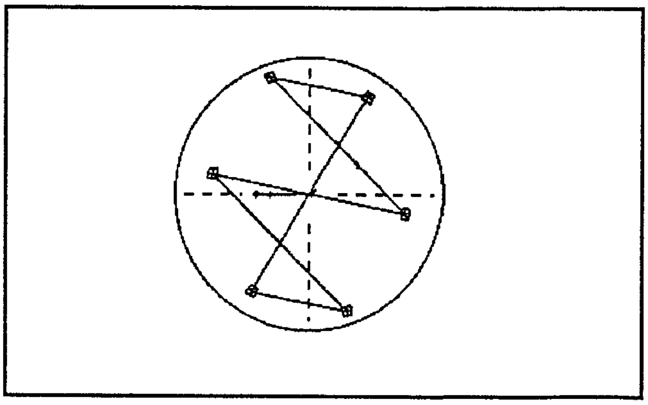
1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:

PAGE : MAIN FUNCTION
REC SIGNAL :**VIDEO**
PAGE : SERVICE ADJ.
ECU CONNECT :EVR
IF ADJ. :ON

**EVR Setting**

CMD : 02 DATA : D0 ADR : **19**

1. Adjust the **VR105** and **VR109** and press [→] or [←] key in EVR so that each dot is in the marker of the vector scope.



# 7. Servo

## 7-1. Reel Torque Adjustment

| | |
|---|---|
| **BOARD** | Servo |
| **SPEC.** | 20±2mV |
| **TEST** | TP301(S), TP302(T), TG300(GND) |
| **ADJUST** | VR501(T), VR502(S) |
| **MODE** | PLAY |
| **M.EQ** | Digital Volt Meter |

1. Confirm the power off and make a short-circuit between **TP116** and **TP505**.
2. Turn the power ON and then set the tube* to cover the sensor LED and place the unit in no tape loading mode.
3. Hold the S-Reel by hand and press the PLAY key.
4. Adjust the **VR502** so that the **TP301**(for S Reel) is within specification.
5. Hold the T-Reel by hand and press the PLAY key.
6. Adjust the **VR501** so that the **TP302**(for T Reel) is within specification.
7. Make a open-circuit between **TP200** and **TP505**.

**Note.**

1. Make a black tube* by yourself.

## 7-2. Tension Offset Adjustment

| | |
|---|---|
| **BOARD** | Servo |
| **SPEC.** | 2.5±0.1V |
| **TEST** | TP402 |
| **ADJUST** | VR402 |
| **MODE** | EJECT |
| **M.EQ** | Digital Volt Meter |

1. Adjust the **VR402** so that the **TP402** voltage is within specification.

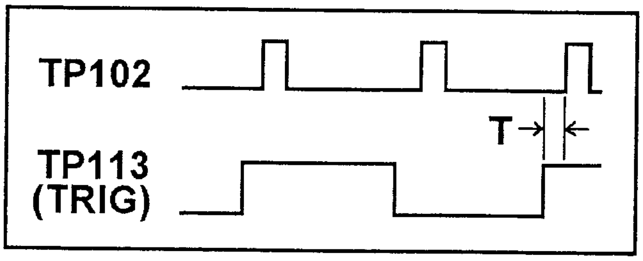
**Note.**

1. Make a black tube* by yourself.

## 7-3. PG Shifter Adjustment

| | |
|---|---|
| **BOARD** | Servo |
| **SPEC.** | 126.3±2.5 μ s |
| **TEST** | TP113, TP102 |
| **ADJUST** | VR101 |
| **MODE** | PLAY |
| **TAPE** | Color Bar |
| **M.EQ** | Oscilloscope |

1. Adjust the **VR101** so that the T is within specification.(Trigger : TP113)



# 8. RF

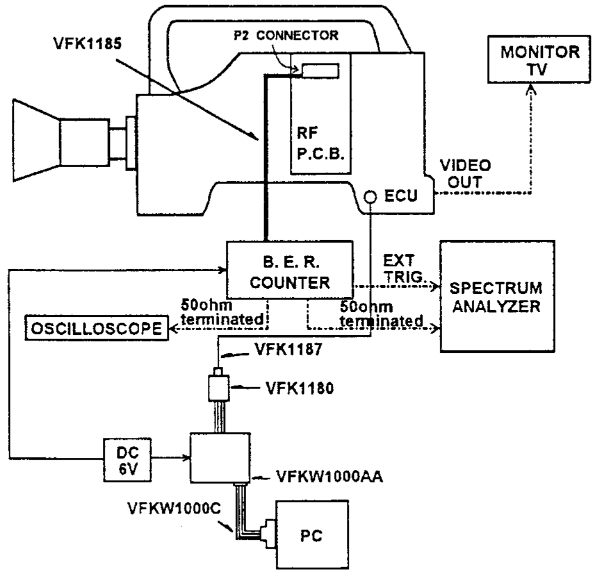
## 8-1. Initial Setting

1. Connect the Camera Recorder, EVR and B.E.R. counter as shown in figure.

**Menu Setting**

1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:

   PAGE : SERVICE ADJ.
   ECU CONNECT :EVR
   CONCEAL :OFF
   SERVO MODE :CTL
4. After setting turn the menu OFF.



VFK1185
P2 CONNECTOR
MONITOR TV
RF P.C.B.
VIDEO OUT
ECU
B. E. R. COUNTER
EXT TRIG.
SPECTRUM ANALYZER
50ohm terminated
OSCILLOSCOPE
50ohm terminated
VFK1187
VFK1180
DC 6V
VFKW1000AA
VFKW1000C
PC

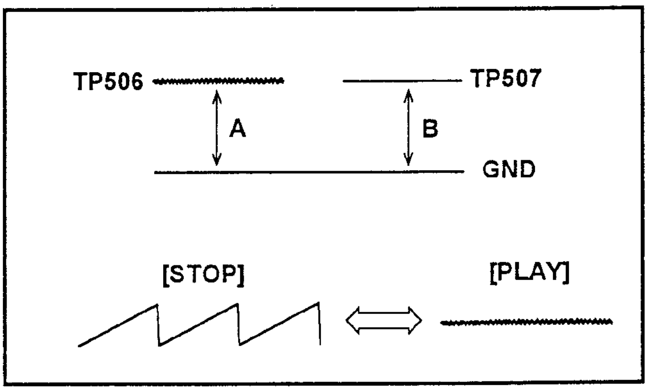
## 8-2. PLL VCO Adjustment

| | |
|---|---|
| **BOARD** | RF |
| **SPEC.** | A=B=2.0±0.1V |
| **TEST** | TP506, TP507 |
| **ADJUST** | EVR |
| **MODE** | PLAY |
| **TAPE** | Color Bar |
| **M.EQ** | Oscilloscope,EVR |

**EVR Setting**

CMD : 02 DATA : **7A** ADR : **0B**

1. Monitor the **TP506** and **507** in the DC mode.
2. Press the [→] or [←] key in EVR so that the levels A and B are the same.



TP506
TP507
A
B
GND
[STOP]
[PLAY]

## 8-3. Menu Setting for RF Adjustment

**Menu Setting**

1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:

   PAGE : SERVICE ADJ.

   | | |
   |---|---|
   | ECU CONNECT | :EVR |
   | CONCEAL | :OFF |
   | INNER ECC | :OFF |
   | OUTER ECC | :OFF |
   | SERVO MODE | :ATF |

4. After setting turn the menu OFF.

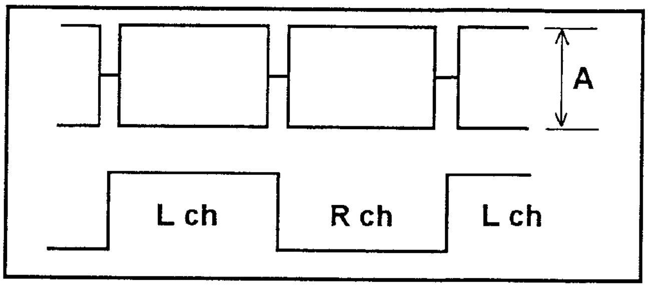
**Spectrum Analyzer**

| | |
|---|---|
| START FREQ | :0Hz |
| STOP FREQ | :25MHz |
| RES BW | :1MHz |
| VIDEO BW | :1kHz |
| SWEEP TIME | :100ms |
| dB/div | :2dB |
| REF LEVEL | :-28dBm |
| ATTEN | :10dB |
| TRIGGER | :EXT |

## 8-4. R/P Envelope Level Confirmation

| | |
|---|---|
| **BOARD** | RF |
| **SPEC.** | A≧70mV |
| **TEST** | R/P ENV,HSW(B.E.R.Counter)<br>(50 Ω terminated) |
| **MODE** | PLAY |
| **TAPE** | Color Bar |
| **M.EQ** | Oscilloscope |

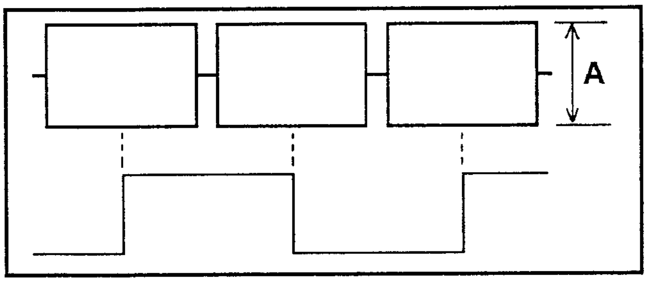
1. Confirm that the waveform is flat.



## 8-5. PB Envelope Level Adjustment

| | |
|---|---|
| **BOARD** | RF |
| **SPEC.** | 100±10mV |
| **TEST** | PB ENV, HSW(B.E.R.Counter)<br>(50 Ω terminated) |
| **ADJUST** | VR400(PB L), VR401(PB R) |
| **MODE** | PLAY |
| **TAPE** | Color Bar |
| **M.EQ** | Oscilloscope |

1. Confirm that the waveform is as shown in figure below.
2. Adjust the **VR400**(L ch) and **VR401**(R ch) so that the level A is within specification.



## 8-6. PB Equalizer Adjustment 1

| | |
|---|---|
| **BOARD** | RF |
| **SPEC.** | 20.93±0.1MHz |
| **TEST** | EYE PAT, HSW(B.E.R.Counter) |
| **ADJUST** | EVR |
| **MODE** | PLAY |
| **TAPE** | Color Bar |
| **M.EQ** | Spectrum Analyzer, EVR |

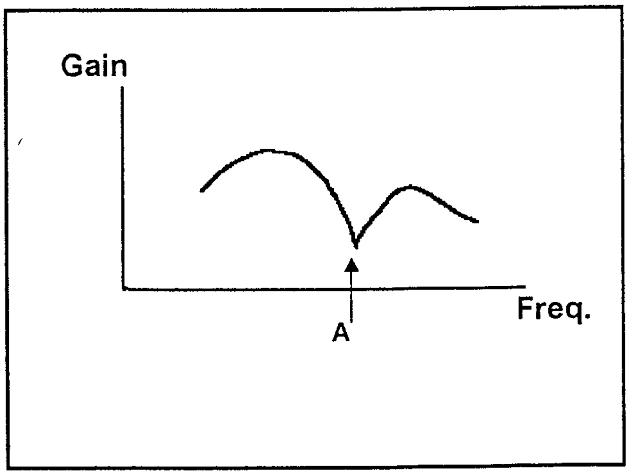
**Menu Setting**

1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:
   PAGE : SERVICE ADJ.
   ECU CONNECT :EVR
   CONCEAL :OFF
   INNER ECC :OFF
   OUTER ECC :OFF
4. After setting turn the menu OFF.

**EVR Setting**

CMD : 02 DATA : **C4** ADR : **0E**

1. Press the [→] or [←] key in EVR so that the frequency at A portion is within specification.



## 8-7. PB Equalizer Adjustment 2

| | |
|---|---|
| **BOARD** | RF |
| **TEST** | VIDEO OUT, B.E.R.Counter |
| **ADJUST** | EVR |
| **MODE** | PLAY |
| **TAPE** | Color Bar |
| **M.EQ** | B.E.R. Counter, Monitor TV |

**EVR Setting**

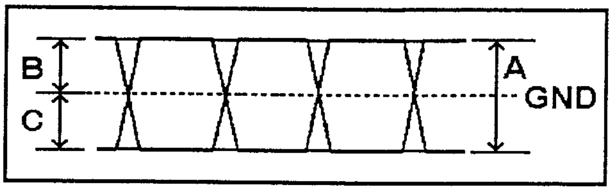
CMD : 02 DATA : **90** ADR : **07** (EQ $\alpha$ L)
CMD : 02 DATA : **90** ADR : **08** (EQ $\alpha$ R)
CMD : 02 DATA : **35** ADR : **09** (EQ $\beta$ L)
CMD : 02 DATA : **35** ADR : **0A** (EQ $\beta$ R)
CMD : 02 DATA : **66** ADR : **0D** (PLL SL)
CMD : 02 DATA : **9E** ADR : **0F** (PLL POS)
CMD : 02 DATA : **CC** ADR : **10** (AUTO EQ)

1. Monitor the VIDEO OUT in monitor TV.
2. Set the ERROR COUNT ON in the B.E.R. counter.
3. Select **L ch** in the B.E.R. Counter.
4. Repeat adjusting the **EQ $\alpha$ L, EQ $\beta$ L, PLL SL, PLL POS** and **AUTO EQ** until the error rate is minimized.(Start from the initial setting mentioned above and press [→] or [←] key in EVR to adjust.)
5. Select **R ch** in the B.E.R. Counter.
6. Fineadjust the **EQ $\alpha$ R** and **EQ $\beta$ R** until the error rate is minimized.

## 8-8. HSE Input Confirmation

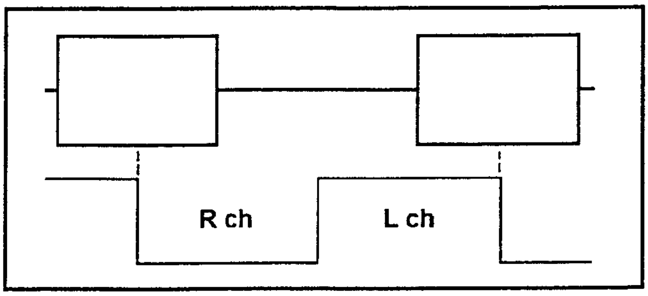
| | |
|---|---|
| **BOARD** | RF |
| **TEST** | TP201, TP300(Trigger) |
| **ADJUST** | VR200(DUTY) |
| **MODE** | REC |
| **TAPE** | Blank Tape |
| **M.EQ** | Oscilloscope |

1. Set the oscilloscope to AC mode.
2. Monitor the **TP201** and confirm that A is 1.3 ± 0.1V.
3. Confirm that B and C are the same.
4. If necessary, adjust the **VR200** slightly.



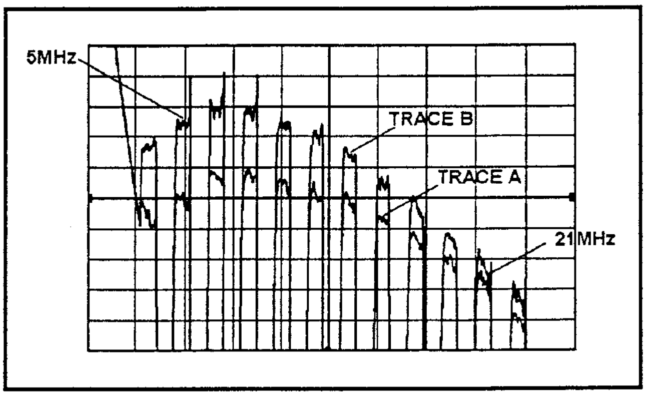
## 8-9. Rec. Curr. & Freq.(L ch) Adj.

| | |
|---|---|
| BOARD | RF |
| TEST | PB ENV, HSW(B.E.R.Counter) |
| ADJUST | VR401(PB R), EVR |
| INPUT | Internal Color Bar |
| MODE | PLAY, REC |
| TAPE | Color Bar, Blank Tape |
| M.EQ | Oscilloscope, Spectrum Analyzer, EVR |



**EVR Setting**

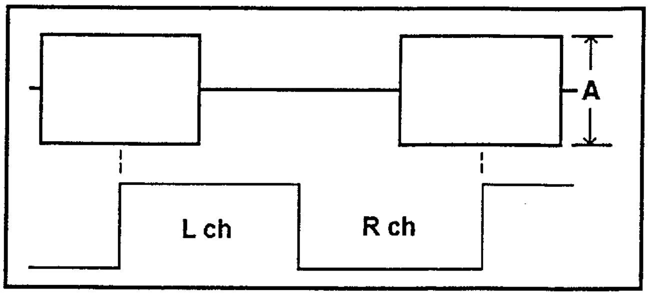
CMD : 02 DATA : **80** ADR : **20** (REC CUR L)
CMD : 02 DATA : **FF** ADR : **1E** (REC FRE L)

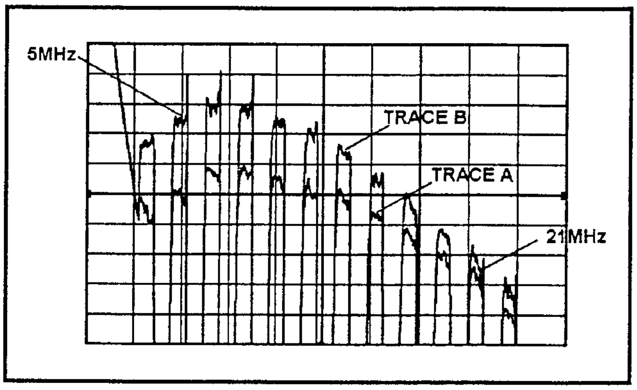


1. Play back the color bar tape and monitor the HSW and PB ENV(50 Ω terminated).
2. Turn the **VR401** until the R ch level is minimized.
3. Input the PB ENV to the spectrum analyzer.
4. Store the average of 30 samples in TRACE B.
5. Eject the alignment tape and insert the blank tape.
6. Monitor the PB envelope in the spectrum analyzer without averaging.
7. Set the EVR to **REC CUR L** mode.
8. Press the [→] or [←] key in EVR so that the level of confidence PB at 5MHz is 4dB lower than that of TRACE B.
9. Set the EVR to **REC FRE L** mode.
10. Press the [←] key in EVR until the level at 21MHz is maximized first.
11. Set the EVR to **REC CUR L** mode.
12. Press the [→] or [←] so that the level at 5MHz is the same as TRACE B.
13. If the level of confidence PB at 21MHz is lower than TRACE B, adjust so that the spectrum of confidence PB is a similar figure to TRACE B in the range less than 20MHz.
14. If the level of confidence PB at 21MHz is higher than TRACE B, adjust so that the level of confidence PB around 5MHz is the same as TRACE B regardless of similarity.

## 8-10. Rec. Curr. & Freq.(R ch) Adj.

| | |
|---|---|
| **BOARD** | RF |
| **SPEC.** | A=100±10mV |
| **TEST** | PB ENV, HSW(B.E.R.Counter) |
| **ADJUST** | VR400(PB L), VR401(PB R), EVR |
| **INPUT** | Internal Color Bar |
| **MODE** | PLAY, REC |
| **TAPE** | Color Bar, Blank Tape |
| **M.EQ** | Oscilloscope, Spectrum Analyzer, EVR |





**EVR Setting**

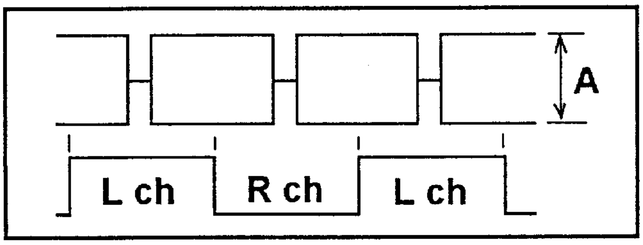
CMD : 02　DATA : **80**　ADR : **21** (REC CUR R)
CMD : 02　DATA : **FF**　ADR : **1F** (REC FRE R)

1. Play back the color bar tape and monitor the HSW and PB ENV(50 Ω terminated).
2. Turn the **VR400** until the L ch level is minimized.
3. Adjust the **VR401** so that the R ch level is within specification.
4. Input the PB ENV to the spectrum analyzer.
5. Store the average of 30 samples in TRACE B.
6. Eject the alignment tape and insert the blank tape.
7. Monitor the confidence PB envelope in the spectrum analyzer without averaging.
8. Set the EVR to **REC CUR R** mode.
9. Press the [→] or [←] key in EVR so that the level of confidence PB at 5MHz is 4dB lower than that of TRACE B.
10. Set the EVR to **REC FRE R** mode.
11. Press the [←] key in EVR until the level at 21MHz is maximized first.
12. Set the EVR to **REC CUR R** mode.
13. Press the [→] or [←] so that the level at 5MHz is the same as TRACE B.
14. If the level of confidence PB at 21MHz is lower than TRACE B, adjust so that the spectrum of confidence PB is a similar figure to TRACE B in the range less than 20MHz.
15. If the level of confidence PB at 21MHz is higher than TRACE B, adjust so that the level of confidence PB around 5MHz is the same as TRACE B regardless of similarity.

## 8-11. Confidence PB Adjustment

| | |
|---|---|
| **BOARD** | RF |
| **SPEC.** | 100±10mV |
| **TEST** | PB ENV, HSW(B.E.R.Counter)<br>(50 Ω terminated) |
| **ADJUST** | VR400(PB L), VR401(PB R) |
| **INPUT** | Internal Color Bar |
| **MODE** | REC |
| **TAPE** | Blank Tape |
| **M.EQ** | Oscilloscope |

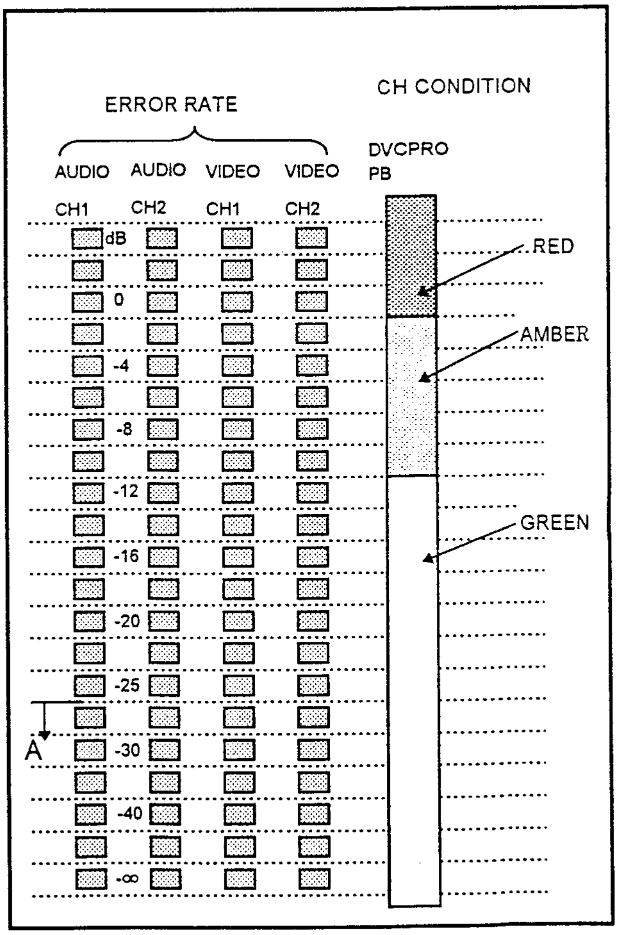
1. Adjust the **VR400** and **401** so that the level A is within specification in confidence PB.


A
L ch
R ch
L ch

## 8-12. Final Confirmation

| | |
|---|---|
| **BOARD** | RF |
| **TEST** | VIDEO OUT |
| **INPUT** | Internal Color Bar |
| **MODE** | REC, PLAY |
| **M.EQ** | B.E.R. Counter, Monitor TV |

1. Record internal color bar.
2. Play back the recorded portion.
3. Confirm that error rate is less than **23** on L and R channels.
4. Play back the recorded portion on AJ-D750 and confirm that error rate is less than A.
5. If out of specification, readjust Rec Current and Frequency Response.
6. Set as follows:
   PAGE : SERVICE ADJ.
   INNER ECC :ON
   OUTER ECC :ON
7. Confirm that there is no error in playback picture.


ERROR RATE
CH CONDITION
AUDIO CH1
AUDIO CH2
VIDEO CH1
VIDEO CH2
DVCPRO PB
dB
0
-4
-8
-12
-16
-20
-25
-30
-40
-∞
A
RED
AMBER
GREEN

# 9. Audio LCD

## 9-1. Initial Setting

**Menu Setting**

1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:

PAGE : MAIN FUNCTION

| | |
|---|---|
| PHANTOM FRONT | :OFF |
| PHANTOM CH1 | :OFF |
| PHANTOM CH2 | :OFF |

PAGE : FUNCTION 4/5

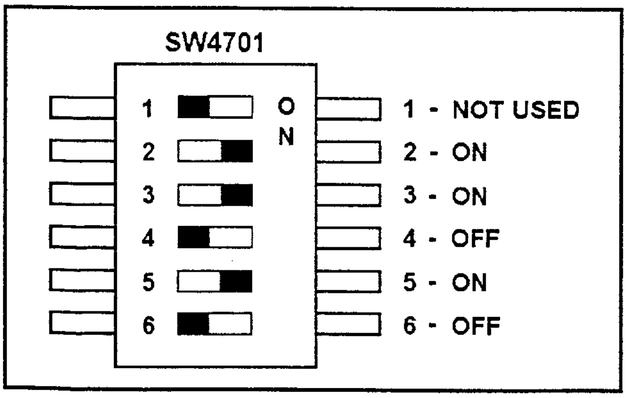
| | |
|---|---|
| FRONT MIC | :-60dB |
| REAR MIC CH1 | :-60dB |
| REAR MIC CH2 | :-60dB |
| LINE CH1/CH2 | :(NTSC) +4dB<br>:(PAL) 0dB |
| REAR AUDIO | :STEREO |
| MIC LOWCUT CH1 | :OFF |
| MIC LOWCUT CH2 | :OFF |
| EMPHASIS | :OFF |

PAGE : FUNCTION 5/5

| | |
|---|---|
| AUDIO OUT | :CH1 |
| LIMITER | :OFF |
| TEST TONE | :OFF |

4. After setting turn the menu OFF.

1. Set the **SW4701** on Audio LCD board as shown in figure.



## 9-2. Playback Level Adjustment

| | |
|---|---|
| **BOARD** | Audio LCD |
| **SPEC.** | (CH 1/CH 2) -20dBu±0.2dB<br>(AUDIO OUT) (NTSC) 4dBu±0.2dB<br>(PAL) 0dBu±0.2dB |
| **TEST** | Multi Connector(CH1,CH2), AUDIO OUT |
| **ADJUST** | VR301, VR401, VR701 |
| **MODE** | PLAY |
| **TAPE** | (NTSC) VFM3580KM(No.1:0~14min)<br>(PAL) VFM3680KM(No.1:0~14min) |
| **M.EQ** | Oscilloscope, Audio Precision |

1. Adjust the **VR301**(CH 1) so that the levels of **CH 1** (12pin multi connector) is within specification.
2. Adjust the **VR401**(CH 2) so that the levels of **CH 2** (12pin multi connector) is within specification.
3. Adjust the **VR701** so that the level of **AUDIO OUT**(XLR) is within specification.

## 9-3. Recording Level Adjustment

| | |
|---|---|
| **BOARD** | Audio LCD |
| **SPEC.** | -20dBu±0.2dB |
| **TEST** | Multi Connector(CH1,CH2) |
| **ADJUST** | VR102, VR202 |
| **INPUT** | (NTSC) 1kHz 4dBu(50 Ω) Sine Wave<br>(PAL) 1kHz 0dBu(50 Ω) Sine Wave |
| **MODE** | STOP |
| **M.EQ** | Oscilloscope, Audio Precision |

1. Set the AUDIO LEVEL VRs to center position.
2. Input the signal mentioned above to AUDIO IN CH1 connector.
3. Adjust the **VR102** so that the level of **CH 1** OUT (multi connector) is within specification.
4. Input the signal mentioned above to AUDIO IN CH2 connector.
5. Adjust the **VR202** so that the level of **CH 2** OUT (multi connector) is within specification.

## 9-4. Meter Adjustment

| | |
|---|---|
| **BOARD** | Audio LCD |
| **SPEC.** | (NTSC)0.63±0.005V,(PAL)0.71±0.005V |
| **TEST** | TP102, TP202 |
| **ADJUST** | VR103, VR203 |
| **INPUT** | (NTSC) 1kHz 4dBu(50 Ω) Sine Wave<br>(PAL) 1kHz 0dBu(50 Ω) Sine Wave |
| **MODE** | STOP |
| **M.EQ** | Digital Volt Meter, Audio Precision |

1. Input the signal mentioned above to AUDIO IN CH1 connector.
2. Adjust the **VR103** so that the DC voltage at the **TP102** is within specification.
3. Input the signal mentioned above to AUDIO IN CH2 connector.
4. Adjust the **VR203** so that the DC voltage at the **TP202** is within specification.
5. Confirm that the Audio Level Meter on LCD indicates **-20dB**.

## 9-5. Test SG Adjustment

| | |
|---|---|
| **BOARD** | Audio LCD |
| **SPEC.** | (Distortion)1.0±0.1%<br>(Level)-20dBu±0.5dB |
| **TEST** | Multi Connector(CH 1) |
| **ADJUST** | VR1, VR2 |
| **MODE** | STOP |
| **M.EQ** | Oscilloscope, Audio Precision |

**Menu Setting**

1. Open the operation panel.
2. Pressing [SHIFT] and [+] buttons, set MENU switch to SET position.
3. Set as follows:
   PAGE : FUNCTION 5/5
   TEST TONE :ON
4. After setting turn the menu OFF.

1. Confirm that there is no input.
2. Select **BARS** in OUTPUT SW and **FRONT MIC** in AUDIO IN SW CH1.
3. Confirm that 1kHz test signal is output.
4. Adjust the **VR1** so that the distortion is within specification.
5. Adjust the **VR2** so that the level is within specification.
6. After the adjustment, return TEST TONE to OFF.

## 9-6. CUE Recording Level Adjustment

| | |
|---|---|
| **BOARD** | Audio LCD |
| **SPEC.** | -10dBu±0.2dB |
| **TEST** | TP501 |
| **ADJUST** | VR501, SW701-2pin |
| **INPUT** | (NTSC) 1kHz 4dBu(50 Ω) Sine Wave<br>(PAL) 1kHz 0dBu(50 Ω) Sine Wave |
| **MODE** | STOP |
| **M.EQ** | Oscilloscope, Audio Precision |

1. Input the signal mentioned above to AUDIO IN CH1 connector.
2. Set the 2nd pin of **SW701** to OFF and adjust the **VR501** so that the level is within specification.

## 9-7. CUE Rec. Current Adjustment

| | |
|---|---|
| **BOARD** | Audio LCD |
| **SPEC.** | 0±0.5dB |
| **TEST** | TP505 |
| **ADJUST** | VR1002(Rear Jack Board), VR503 |
| **INPUT** | 1kHz 4dBu(50 Ω) Sine Wave |
| **MODE** | PLAY |
| **TAPE** | (NTSC) VFM3580KM(No.1:0~14min)<br>(PAL) VFM3680KM(No.1:0~14min)<br>Blank Tape |
| **M.EQ** | Oscilloscope, Audio Precision |

1. Confirm that the 2nd pin of **SW701** to OFF and input the signal mentioned above to AUDIO IN CH1 connector.
2. Playback the alignment tape and adjust the **VR503** so that the level at the **TP505** is **-12.0± 0.5dB**.
3. Record the signal.
4. Play back the recorded signal and adjust the **VR1002** on the Rear Jack Board so that the level difference from the level adjusted above is within specification.
5. After the adjustment, return the 2nd pin of **SW701** to ON.

## 9-8. Final Setting

**Menu Setting**

1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set MENU switch to SET position.
3. Set as follows:

PAGE : MAIN FUNCTION

| | |
|---|---|
| PHANTOM FRONT | :ON |
| PHANTOM CH1 | :OFF |
| PHANTOM CH2 | :OFF |

PAGE : FUNCTION 4/5

| | |
|---|---|
| FRONT MIC | :-40dB |
| REAR MIC CH1 | :-60dB |
| REAR MIC CH2 | :-60dB |
| LINE CH1/CH2 | :(NTSC) +4dB<br>:(PAL) 0dB |
| REAR AUDIO | :STEREO |
| MIC LOWCUT CH1 | :OFF |
| MIC LOWCUT CH2 | :OFF |
| EMPHASIS | :OFF |

PAGE : FUNCTION 5/5

| | |
|---|---|
| AUDIO OUT | :CH1 |
| LIMITER | :ON |
| TEST TONE | :ON |

4. After setting turn the menu OFF.

# 10. EVF

## 10-1. H Free Run Adjustment

| | |
|---|---|
| **BOARD** | H Def |
| **SPEC.** | 15.75±0.1kHz (NTSC)<br>15.625±0.1kHz (PAL) |
| **TEST** | TP9102 |
| **ADJUST** | VR9001 |
| **M.EQ** | Frequency Counter |

1. Adjust the **VR9001** so that the frequency at the **TP9102** is within specification without input signal.

## 10-2. V Free Run Adjustment

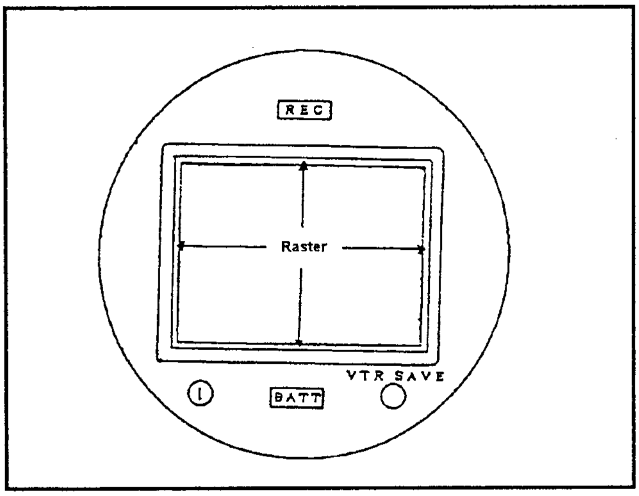
| | |
|---|---|
| **BOARD** | H Def |
| **SPEC.** | 52±1Hz (NTSC)<br>43±1Hz (PAL) |
| **TEST** | TP9002 |
| **ADJUST** | VR9002 |
| **M.EQ** | Frequency Counter |

1. Adjust the **VR9002** so that the frequency at the **TP9002** is within specification without input signal.

## 10-3. Sub Bright Adjustment

| | |
|---|---|
| **BOARD** | H Def |
| **TEST** | EVF Picture |
| **ADJUST** | VR9103 |
| **SUBJECT** | 90% White |

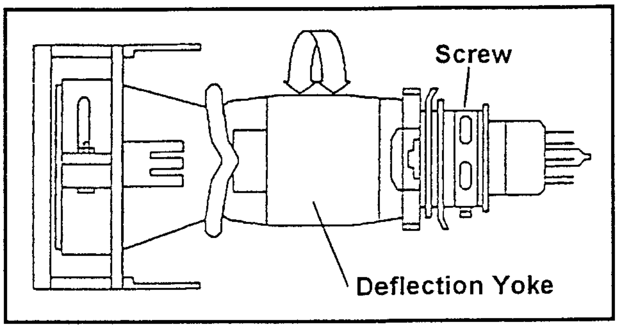
1. Set BRIGHT VR to MAX, CONTRAST VR to MAX and PEAKING VR to MIN.
2. Adjust the **VR9103** so that raster slightly appears.

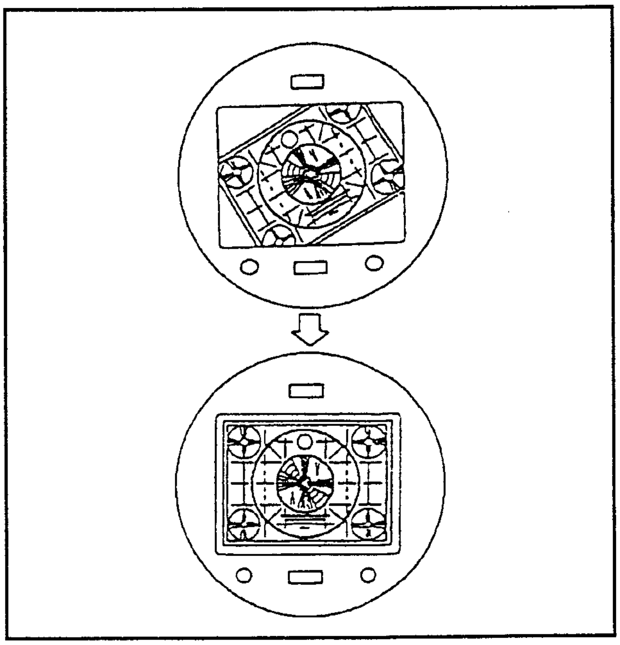

REC
Raster
VTR SAVE
BATT

## 10-4. Rotation Adjustment

| | |
|---|---|
| **TEST** | EVF Picture |
| **ADJUST** | Deflection Yoke |
| **SUBJECT** | Registration Chart |

1. Loosen the screw and rotate Deflection Yoke so that the picture stands horizontally.
2. Tighten the screw again.

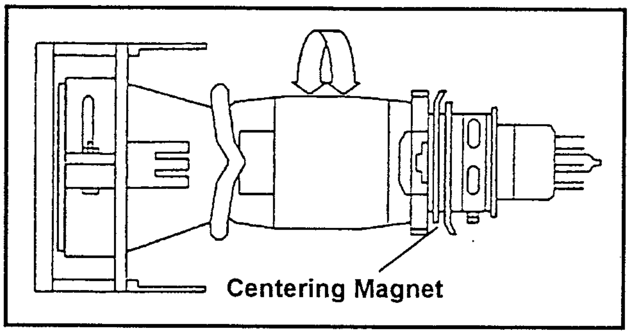

Screw
Deflection Yoke

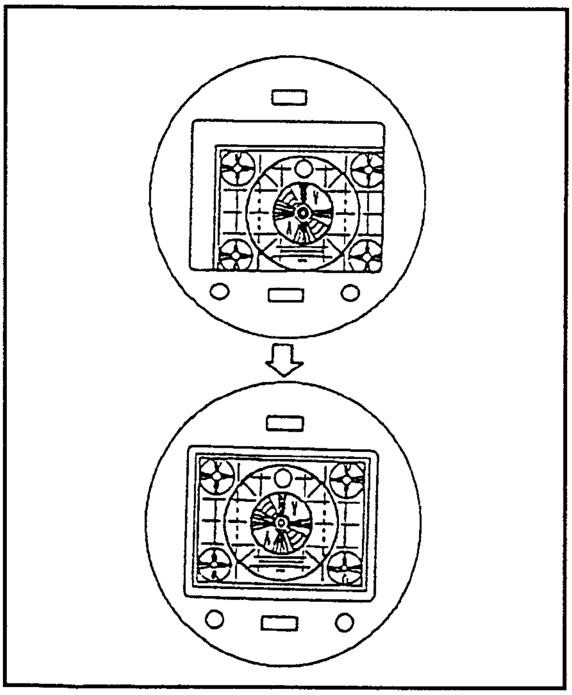


## 10-5. Centering Adjustment

| | |
|---|---|
| **BOARD** | H Def |
| **TEST** | EVF Picture |
| **ADJUST** | Centering Magnet |
| **SUBJECT** | Registration Chart |

1. Set BRIGHT VR to MAX, CONTRAST VR to MAX and PEAKING VR to MIN.
2. Rotate Centering Magnet so that the picture stands at the center.

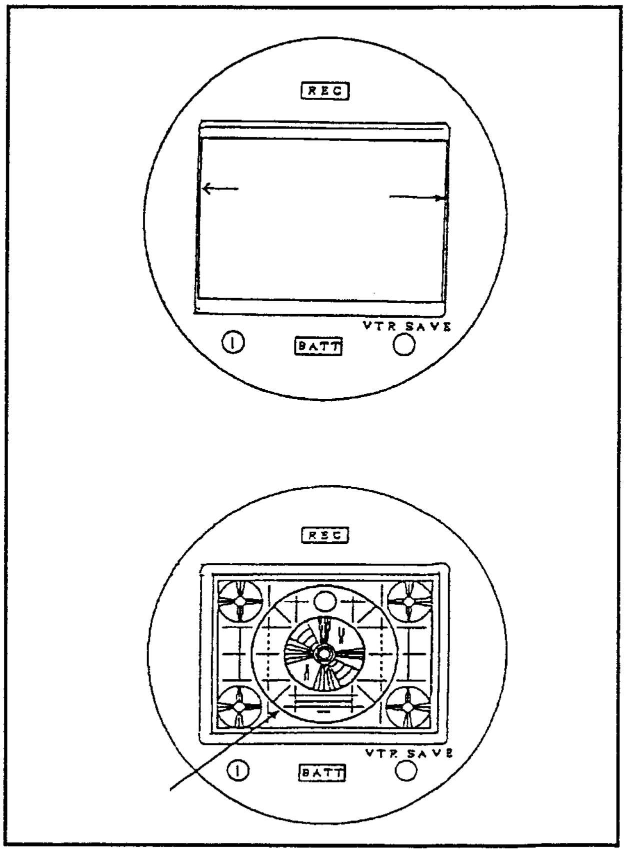




## 10-6. Size Adjustment

| | |
|---|---|
| **BOARD** | H Def, VIDEO |
| **TEST** | EVF Picture |
| **ADJUST** | VR9101(H DEF), VR9003(VIDEO) |
| **SUBJECT** | Registration Chart |

1. Set BRIGHT VR to MAX, CONTRAST VR to MAX and PEAKING VR to MIN.
2. Adjust the **VR9101** so that the picture is maximized.
3. Repeat Rotation and Centering adjustments slightly in case of need.
4. Adjust the **VR9003** so that the circle of chart is most round.



## 10-7. V Linearity Adjustment

| | |
|---|---|
| **BOARD** | VIDEO |
| **TEST** | EVF Picture |
| **ADJUST** | VR9004 |
| **SUBJECT** | Registration Chart |

1. Adjust the **VR9004** so that the circle of chart is most round.

## 10-8. Balance Adjustment

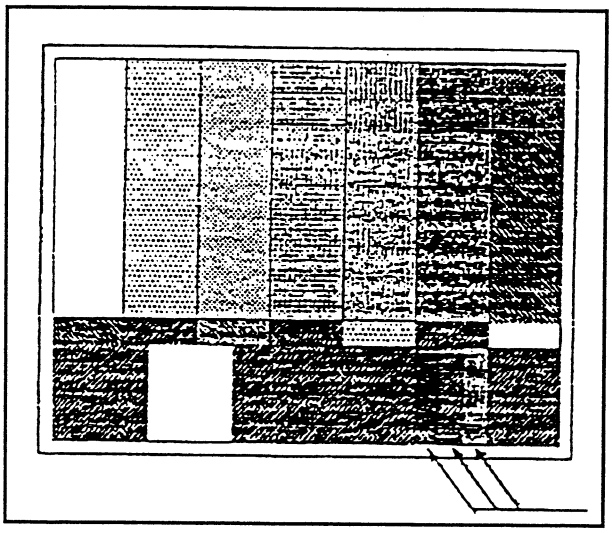
| | |
|---|---|
| **TEST** | EVF Picture |
| **ADJUST** | Deflection Yoke<br>Centering Magnet<br>VR9003, VR9004 |
| **SUBJECT** | Registration Chart |

1. Fineadjust Rotation, Centering, Size(Vertical) and V Linearity.

## 10-9. Bright Adjustment

| | |
|---|---|
| **BOARD** | VR.SW |
| **TEST** | EVF Picture |
| **ADJUST** | VR9301 |
| **SUBJECT** | Color Bar(SMPTE) |

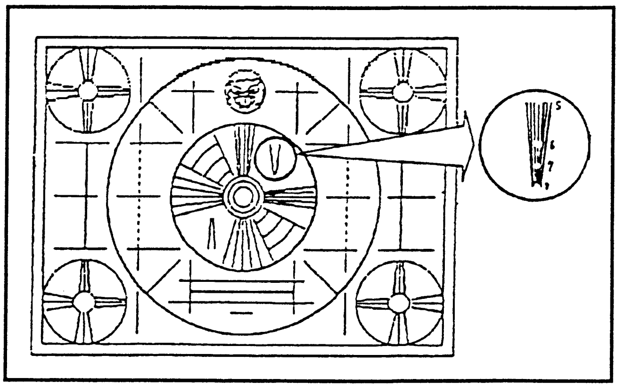
1. Set CONTRAST VR to MAX and PEAKING VR to MIN.
2. Monitor the three regions indicated by arrow
3. Adjust the **VR9301** so that the right region is slightly lighted and other two is black.



## 10-10. Focus Adjustment

| | |
|---|---|
| **BOARD** | H DEF |
| **TEST** | EVF Picture |
| **ADJUST** | VR9102 |
| **SUBJECT** | Registration Chart |

1. Set CONTRAST VR to MAX and PEAKING VR to MIN.
2. Adjust the **VR9102** so that resolution is best.



# SECTION 5

# BLOCK DIAGRAMS

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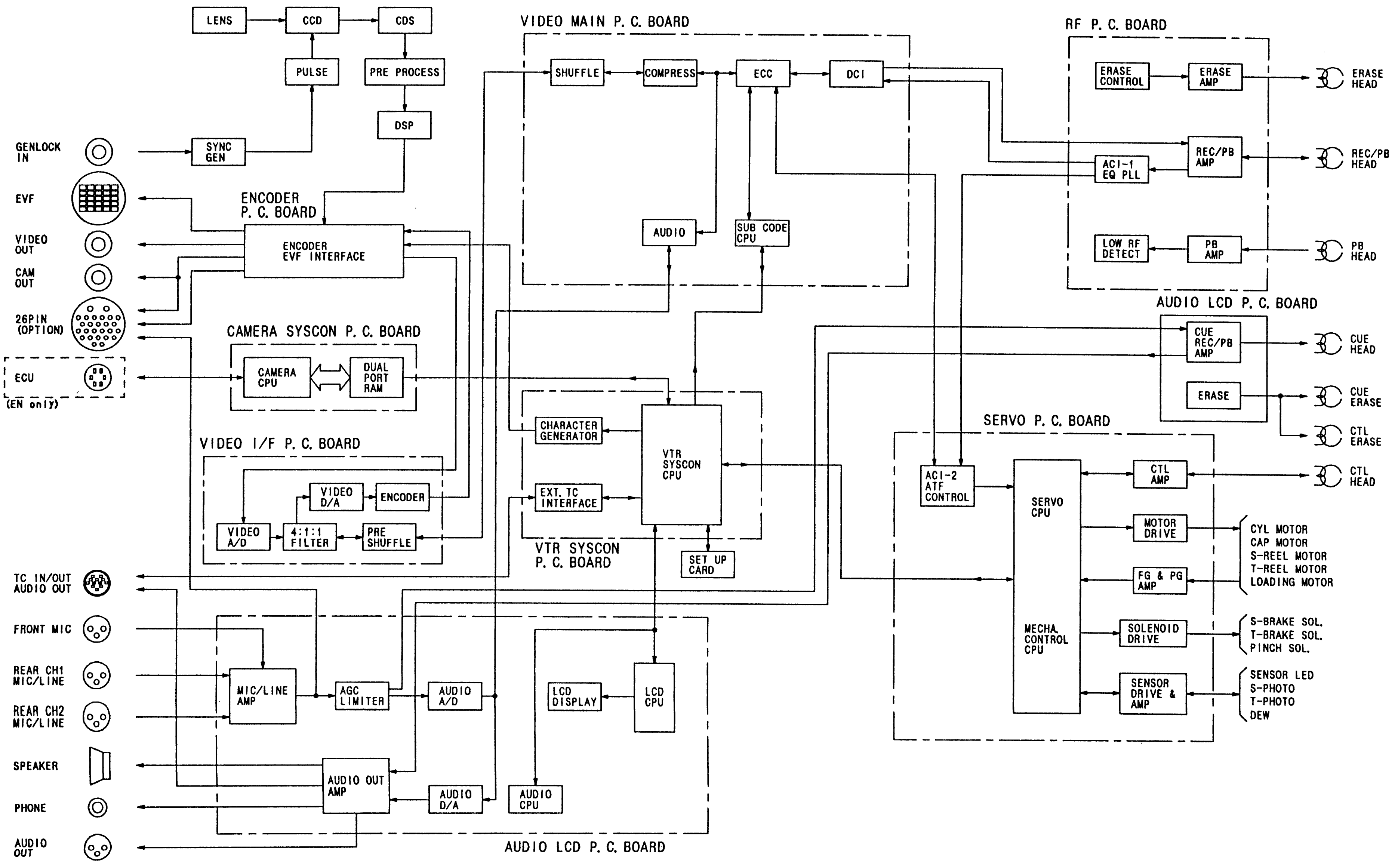
# OVERALL BLOCK DIAGRAM



LENS
CCD
CDS
PULSE
PRE PROCESS
DSP
SYNC GEN
GENLOCK IN
EVF
VIDEO OUT
CAM OUT
26PIN (OPTION)
ECU
(EN only)
ENCODER P. C. BOARD
ENCODER EVF INTERFACE
CAMERA SYSCON P. C. BOARD
CAMERA CPU
DUAL PORT RAM
VIDEO I/F P. C. BOARD
VIDEO D/A
ENCODER
VIDEO A/D
4:1:1 FILTER
PRE SHUFFLE
VIDEO MAIN P. C. BOARD
SHUFFLE
COMPRESS
ECC
DCI
AUDIO
SUB CODE CPU
VTR SYSCON P. C. BOARD
CHARACTER GENERATOR
EXT. TC INTERFACE
VTR SYSCON CPU
SET UP CARD
RF P. C. BOARD
ERASE CONTROL
ERASE AMP
ERASE HEAD
ACI-1 EQ PLL
REC/PB AMP
REC/PB HEAD
LOW RF DETECT
PB AMP
PB HEAD
AUDIO LCD P. C. BOARD
CUE REC/PB AMP
CUE HEAD
ERASE
CUE ERASE
CTL ERASE
SERVO P. C. BOARD
ACI-2 ATF CONTROL
SERVO CPU
MECHA. CONTROL CPU
CTL AMP
CTL HEAD
MOTOR DRIVE
CYL MOTOR
CAP MOTOR
S-REEL MOTOR
T-REEL MOTOR
LOADING MOTOR
FG & PG AMP
SOLENOID DRIVE
S-BRAKE SOL.
T-BRAKE SOL.
PINCH SOL.
SENSOR DRIVE & AMP
SENSOR LED
S-PHOTO
T-PHOTO
DEW
TC IN/OUT
AUDIO OUT
FRONT MIC
REAR CH1 MIC/LINE
REAR CH2 MIC/LINE
SPEAKER
PHONE
AUDIO OUT
MIC/LINE AMP
AGC LIMITER
AUDIO A/D
LCD DISPLAY
LCD CPU
AUDIO OUT AMP
AUDIO D/A
AUDIO CPU
AUDIO LCD P. C. BOARD

## CDS P.C.Board

CDS is the abbreviation of Correlated Double Sampling which smoothes CCD outputs.

Input signal, **R IN,** from CCD P.C.Board is processed with **LPF.** After that it has two ways. Upper one is for signal component process, lower one is for noise component.

In upper way the sample pulse,**SMPL,** samples and holds the charge level of signal component. The clamp pulse,**CLMP,** samples and holds the pedestal level of signal component.

In lower way the sample pulse,**SMPL,** samples and holds the noise level of signal component. The clamp pulse,**CLMP,** samples and holds the pedestal level of noise component.

The difference between signal component and noise component is output to Pre Process P.C.Board as **R-S/H.**

**VC101** is the VR to minimize career leak. **VR102** adjusts DC level, and **VR101** does output level.

Input signal, **G IN,** from CCD P.C.Board is processed with **LPF.** After that it has two ways. Upper one is for signal component process, lower one is for noise component.

In upper way the sample pulse,**SMPL,** samples and holds the charge level of signal component. The clamp pulse,**CLMP,** samples and holds the pedestal level of signal component.

In lower way the sample pulse,**SMPL,** samples and holds the noise level of signal component. The clamp pulse,**CLMP,** samples and holds the pedestal level of noise component.

The difference between signal component and noise component is output to Pre Process P.C.Board as **G-S/H.**

**VC201** is the VR to minimize career leak. **VR202** adjusts DC level, and **VR201** does output level.

Input signal, **B IN,** from CCD P.C.Board is processed with **LPF.** After that it has two ways. Upper one is for signal component process, lower one is for noise component.

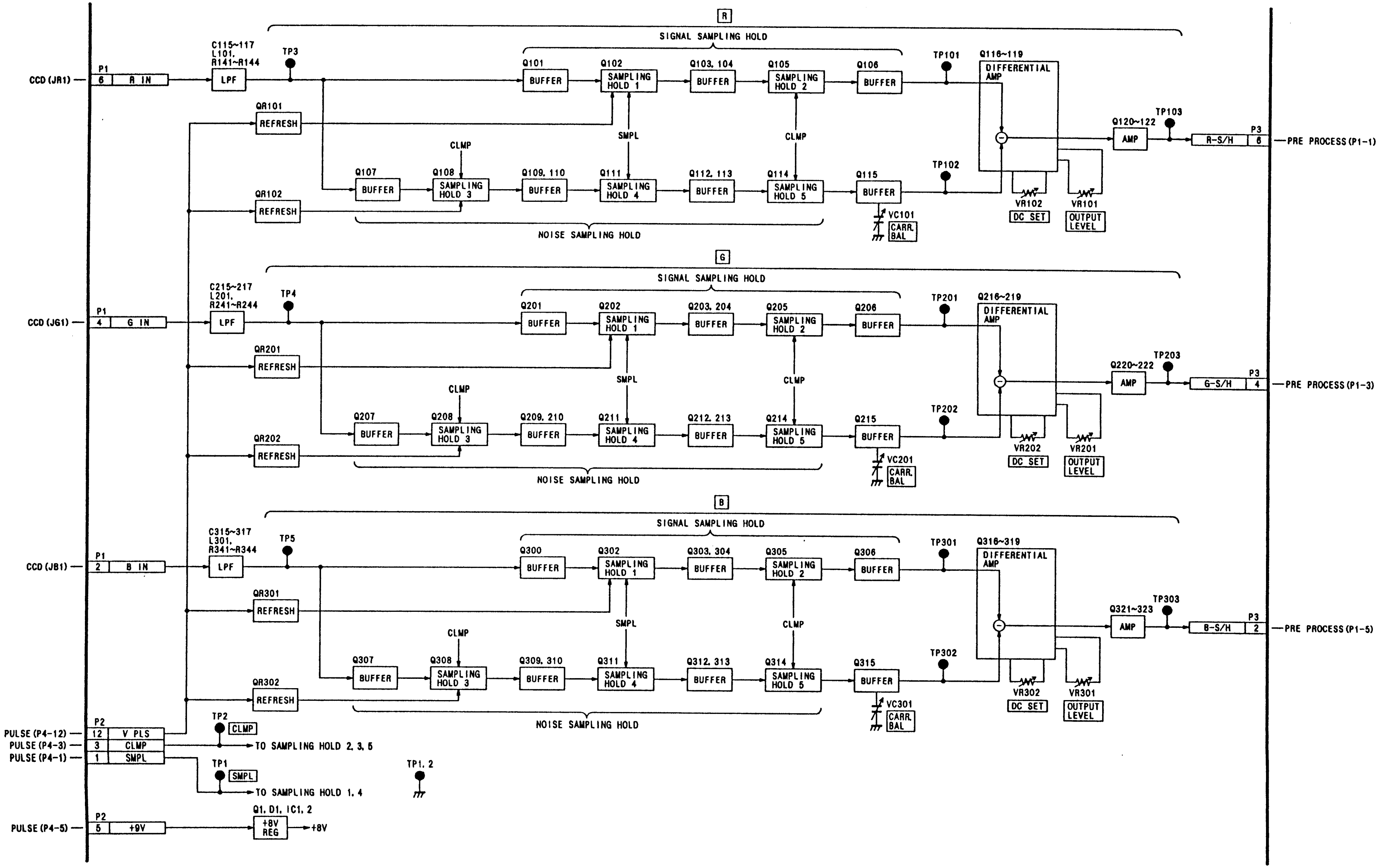
In upper way the sample pulse,**SMPL,** samples and holds the charge level of signal component. The clamp pulse,**CLMP,** samples and holds the pedestal level of signal component.

In lower way the sample pulse,**SMPL,** samples and holds the noise level of signal component. The clamp pulse,**CLMP,** samples and holds the pedestal level of noise component.

The difference between signal component and noise component is output to Pre Process P.C.Board as **B-S/H.**

**VC301** is the VR to minimize career leak. **VR302** adjusts DC level, and **VR301** does output level.

# CDS BLOCK DIAGRAM


R
G
B
SIGNAL SAMPLING HOLD
NOISE SAMPLING HOLD
CCD (JR1)
CCD (JG1)
CCD (JB1)
P1
6 R IN
4 G IN
2 B IN
C115~117
L101,
R141~R144
C215~217
L201,
R241~R244
C315~317
L301,
R341~R344
LPF
TP3
TP4
TP5
QR101
QR102
QR201
QR202
QR301
QR302
REFRESH
Q101
Q102
Q103, 104
Q105
Q106
Q107
Q108
Q109, 110
Q111
Q112, 113
Q114
Q115
Q201
Q202
Q203, 204
Q205
Q206
Q207
Q208
Q209, 210
Q211
Q212, 213
Q214
Q215
Q300
Q302
Q303, 304
Q305
Q306
Q307
Q308
Q309, 310
Q311
Q312, 313
Q314
Q315
BUFFER
SAMPLING HOLD 1
SAMPLING HOLD 2
SAMPLING HOLD 3
SAMPLING HOLD 4
SAMPLING HOLD 5
SMPL
CLMP
TP101
TP102
TP103
TP201
TP202
TP203
TP301
TP302
TP303
Q116~119
Q216~219
Q316~319
DIFFERENTIAL AMP
Q120~122
Q220~222
Q321~323
AMP
VC101
VC201
VC301
CARR. BAL
VR102
VR202
VR302
DC SET
VR101
VR201
VR301
OUTPUT LEVEL
P3
R-S/H 6
G-S/H 4
B-S/H 2
PRE PROCESS (P1-1)
PRE PROCESS (P1-3)
PRE PROCESS (P1-5)
PULSE (P4-12)
PULSE (P4-3)
PULSE (P4-1)
PULSE (P4-5)
P2
12 V PLS
3 CLMP
1 SMPL
5 +9V
TP2
CLMP
TO SAMPLING HOLD 2, 3, 5
TP1
SMPL
TO SAMPLING HOLD 1, 4
TP1, 2
Q1, D1, IC1, 2
+8V REG
+8V

## Pulse P.C.Board

This circuit makes those pulses which drive CCD.

**IC2** makes V-CCD Drive Pulse of **VA1~VA4,VB1~VB4,**Charge Pulse of **CH1,CH2** and Shutter Pulse of **CHS** from V Drive Pulse **CCD VD** supplied from Sync P.C.Board. Shutter speed is controlled by **SHUT A,SHUT B** and **SHUT C.** The logic table is located on the top left of the diagram.

**SLOW SHUTTER** of **IC7,IC8** and **IC9** make the shutter pulse used in 1/50 of shutter speed. V-CCD Drive Pulses are supplied to CCD P.C.Board as **XVA1~XVA2、XVB1~XVB4.**

**VR14** can shift H Drive, **CCD HD,** to change moduration.

The PLL which is composed of phase comparator in **IC2** and oscillator **X1** generates H-CCD Drive Pulse **H12** and **H34** in **IC1** locked to **CCD HD.** These are supplied to CCD P.C.Board as **XH1、XH2.**

Reset Pulse of**XR**, Clamp Pulse of **CLMP** and Sample Pulse of **SMPL** are generated in the same way and supplied to CCD P.C.Board.

OG Voltage of R/G/B depend on **VR10,VR11** and **VR12.** SUB Voltage depend on **VR7,VR8** and **VR9.**

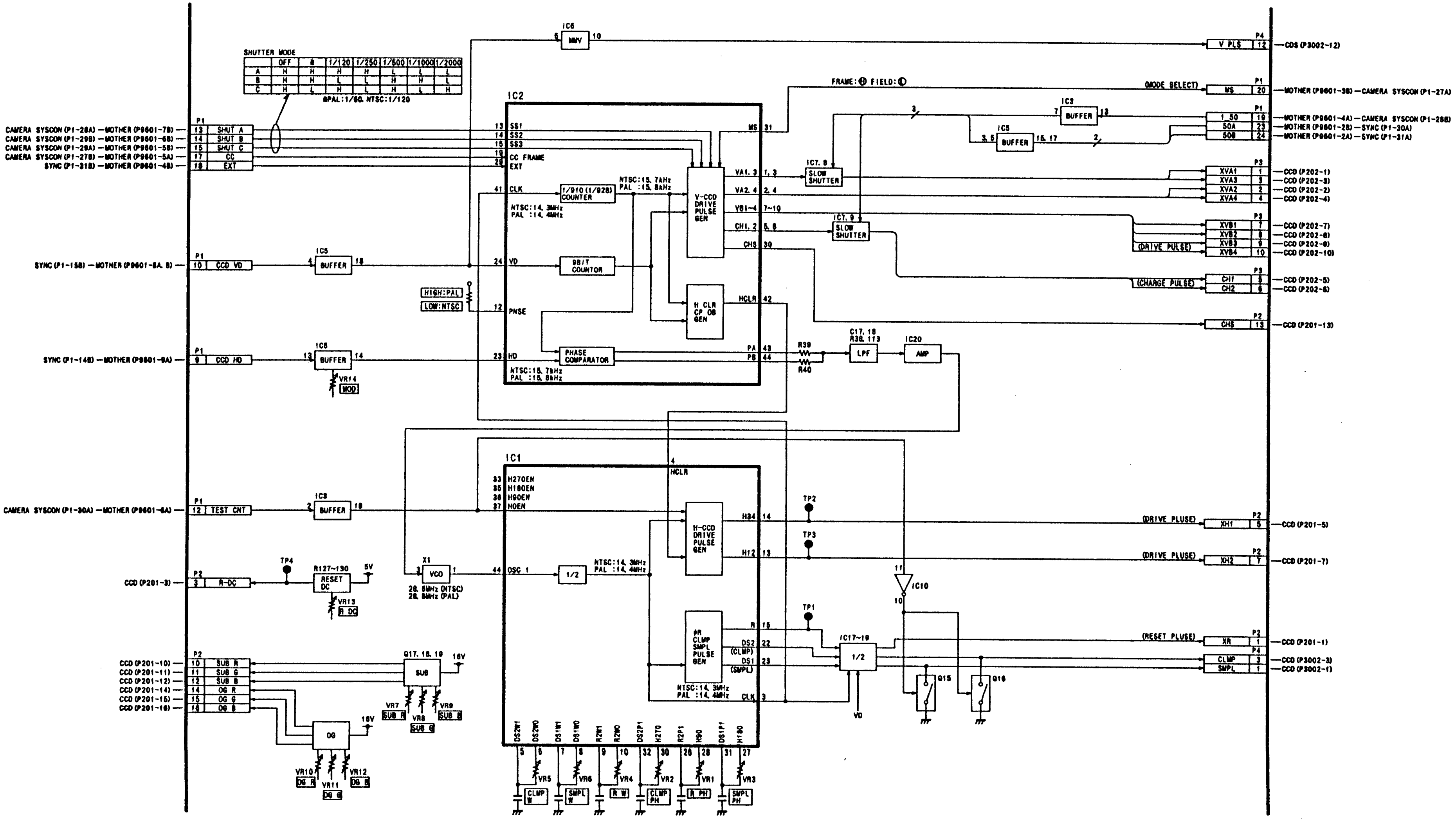
The width and phase of Sample Pulse are adjusted with **VR6** and **VR3.**

The width and Phase of Clamp Pulse are adjusted with **VR5** and **VR2.**

The width and Phase of Reset Pulse are adjusted with **VR4** and **VR1.**

DC voltage of Reset Pulse is adjusted with **VR13.**

# PULSE BLOCK DIAGRAM



SHUTTER MODE

| | OFF | ※ | 1/120 | 1/250 | 1/500 | 1/1000 | 1/2000 |
|---|---|---|---|---|---|---|---|
| A | H | H | H | H | L | L | L |
| B | H | H | L | L | H | H | L |
| C | H | L | H | L | H | L | H |

※PAL:1/60, NTSC:1/120

CAMERA SYSCON (P1-28A) —MOTHER (P9601-7B) —
CAMERA SYSCON (P1-29B) —MOTHER (P9601-6B) —
CAMERA SYSCON (P1-29A) —MOTHER (P9601-5B) —
CAMERA SYSCON (P1-27B) —MOTHER (P9601-5A) —
SYNC (P1-31B) —MOTHER (P9601-4B) —
P1
13 SHUT A
14 SHUT B
15 SHUT C
17 CC
18 EXT
SYNC (P1-15B) —MOTHER (P9601-8A, B) —
P1
10 CCD VD
IC5
BUFFER
4
18
HIGH:PAL
LOW:NTSC
SYNC (P1-14B) —MOTHER (P9601-9A) —
P1
9 CCD HD
IC5
BUFFER
13
14
VR14
MOD
IC6
MMV
5
10
IC2
13 SS1
14 SS2
15 SS3
19 CC FRAME
20 EXT
41 CLK
NTSC:14.3MHz
PAL :14.4MHz
1/910 (1/928) COUNTER
NTSC:15.7kHz
PAL :15.6kHz
V-CCD DRIVE PULSE GEN
24 VD
9BIT COUNTOR
12 PNSE
H CLR CP OB GEN
23 HD
PHASE COMPARATOR
NTSC:15.7kHz
PAL :15.6kHz
MS 31
VA1, 3 1, 3
VA2, 4 2, 4
VB1~4 7~10
CH1, 2 5, 6
CHS 30
HCLR 42
PA 43
PB 44
R39
R40
C17, 18
R38, 113
LPF
IC20
AMP
FRAME: Ⓗ FIELD: Ⓛ
(MODE SELECT)
IC3
BUFFER
7
13
IC5
BUFFER
3, 5
15, 17
3
2
IC7, 8
SLOW SHUTTER
IC7, 9
SLOW SHUTTER
(DRIVE PULSE)
(CHARGE PULSE)
P4
V PLS 12
—CDS (P3002-12)
P1
MS 20
—MOTHER (P9601-3B) —CAMERA SYSCON (P1-27A)
P1
1_50 19
50A 23
50B 24
—MOTHER (P9601-4A) —CAMERA SYSCON (P1-28B)
—MOTHER (P9601-2B) —SYNC (P1-30A)
—MOTHER (P9601-2A) —SYNC (P1-31A)
P3
XVA1 1
XVA3 3
XVA2 2
XVA4 4
—CCD (P202-1)
—CCD (P202-3)
—CCD (P202-2)
—CCD (P202-4)
P3
XVB1 7
XVB2 8
XVB3 9
XVB4 10
—CCD (P202-7)
—CCD (P202-8)
—CCD (P202-9)
—CCD (P202-10)
P3
CH1 5
CH2 6
—CCD (P202-5)
—CCD (P202-6)
P2
CHS 13
—CCD (P201-13)
CAMERA SYSCON (P1-30A) —MOTHER (P9601-6A) —
P1
12 TEST CNT
IC3
BUFFER
2
18
CCD (P201-3) —
P2
3 R-DC
TP4
R127~130
RESET DC
5V
VR13
R DC
CCD (P201-10) —
CCD (P201-11) —
CCD (P201-12) —
CCD (P201-14) —
CCD (P201-15) —
CCD (P201-16) —
P2
10 SUB R
11 SUB G
12 SUB B
14 OG R
15 OG G
16 OG B
Q17, 18, 19
SUB
16V
VR7
SUB R
VR8
SUB G
VR9
SUB B
OG
16V
VR10
OG R
VR11
OG G
VR12
OG B
X1
VCO
3
1
28.6MHz (NTSC)
28.8MHz (PAL)
IC1
33 H270EN
35 H180EN
36 H90EN
37 HOEN
44 OSC 1
1/2
NTSC:14.3MHz
PAL :14.4MHz
4
HCLR
H-CCD DRIVE PULSE GEN
H34 14
H12 13
φR CLMP SMPL PULSE GEN
R 15
DS2 22
(CLMP)
DS1 23
(SMPL)
NTSC:14.3MHz
PAL :14.4MHz
CLK 3
DS2W1
DS2W0
DS1W1
DS1W0
R2W1
R2W0
DS2P1
H270
R2P1
H90
DS1P1
H180
5
6
7
8
9
10
32
30
26
28
31
27
VR5
VR6
VR4
VR2
VR1
VR3
CLMP W
SMPL W
R W
CLMP PH
R PH
SMPL PH
TP2
TP3
TP1
11
IC10
10
IC17~19
1/2
VD
Q15
Q16
(DRIVE PLUSE)
P2
XH1 5
—CCD (P201-5)
(DRIVE PLUSE)
P2
XH2 7
—CCD (P201-7)
(RESET PLUSE)
P2
XR 1
—CCD (P201-1)
P4
CLMP 3
SMPL 1
—CCD (P3002-3)
—CCD (P3002-1)

## Pre Process P.C.Board

This circuit processes Dark Shading, White Shading, Pre Gamma and so on.

**R S/H** supplied from CDS P.C.Board is input to LPF,**FL1.** Another filter **FL2** thins reset pulses to read two pixels together when GAIN is set to 30dB. **IC1** is a switch prepared for this function. It selects 6th pin side in 30dB mode, otherwise does 7th pin. The switching signal is **30DB SW** supplied to 5th pin.

Dark Shading,**DS R,** is added to the output from **IC1.** The signal is adjusted in Gain at **Q4、6 and 7** and selected with **TEST R** which is a RAMP signal for test.

**IC3** processes White Shading,**WS R,** and Auto White Balance,**AWB R. VR1** adjusts pedestal level. **VR3** adjusts pedestal tracking.

**IC5** processes Blanking. **IC6、Q22** and **Q23** process Pre Gamma. **VR2** adjusts the level required before A/D conversion. Finally the signal is output to DSP P.C.Board as **AD R.**

**G S/H** supplied from CDS P.C.Board is input to LPF,**FL201.** Another filter **FL202** thins reset pulses to read two pixels together when GAIN is set to 30dB. **IC201** is a switch prepared for this function. It selects 6th pin side in 30dB mode, otherwise does 7th pin. The switching signal is **30DB SW** supplied to 5th pin.

Dark Shading,**DS G,** is added to the output from **IC201.** The signal is adjusted in Gain at **Q204、206 and 207** and selected with **TEST G** which is a RAMP signal for test.

**IC203** processes White Shading,**WS G,** and Auto White Balance,**AWB G. VR201** adjusts pedestal level.

**IC205** processes Blanking. **IC206、Q222** and **Q223** process Pre Gamma. **VR202** adjusts the level required before A/D conversion. Finally the signal is output to DSP P.C.Board as **AD G.**

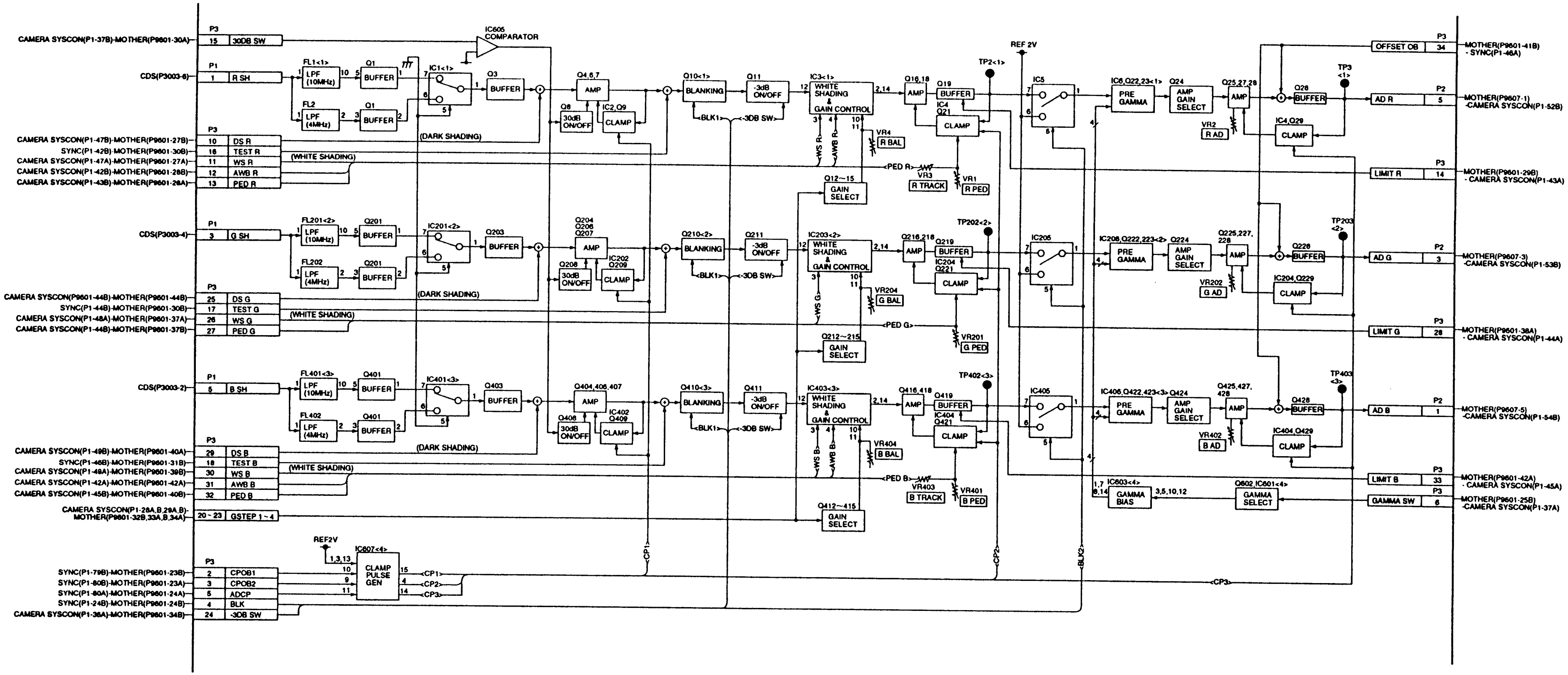
**B S/H** supplied from CDS P.C.Board is input to LPF,**FL401.** Another filter **FL402** thins reset pulses to read two pixels together when GAIN is set to 30dB. **IC401** is a switch prepared for this function. It selects 6th pin side in 30dB mode, otherwise does 7th pin. The switching signal is **30DB SW** supplied to 5th pin.

Dark Shading,**DS B,** is added to the output from **IC401.** The signal is adjusted in Gain at **Q404、406 and 407** and selected with **TEST B** which is a RAMP signal for test.

**IC403** processes White Shading,**WS B,** and Auto White Balance,**AWB B. VR401** adjusts pedestal level. **VR403** adjusts pedestal tracking.

**IC405** processes Blanking. **IC406、Q422** and **Q423** process Pre Gamma. **VR402** adjusts the level required before A/D conversion. Finally the signal is output to DSP P.C.Board as **AD B.**

# PREPROCESS BLOCK DIAGRAM



CAMERA SYSCON(P1-37B)-MOTHER(P9601-30A)
P3
15
30DB SW
IC605
COMPARATOR
CDS(P3003-6)
P1
1
R SH
FL1<1>
LPF (10MHz)
FL2
LPF (4MHz)
Q1
BUFFER
IC1<1>
Q3
BUFFER
(DARK SHADING)
CAMERA SYSCON(P1-47B)-MOTHER(P9601-27B)
SYNC(P1-42B)-MOTHER(P9601-30B)
CAMERA SYSCON(P1-47A)-MOTHER(P9601-27A)
CAMERA SYSCON(P1-42B)-MOTHER(P9601-28B)
CAMERA SYSCON(P1-43B)-MOTHER(P9601-28A)
10 DS R
16 TEST R
11 WS R
12 AWB R
13 PED R
(WHITE SHADING)
Q4,6,7
AMP
Q8
30dB ON/OFF
IC2,Q9
CLAMP
Q10<1>
BLANKING
<BLK1>
Q11
-3dB ON/OFF
<-3DB SW>
IC3<1>
WHITE SHADING & GAIN CONTROL
<WS R>
<AWB R>
VR4
R BAL
<PED R>
VR3
R TRACK
VR1
R PED
Q12~15
GAIN SELECT
Q16,18
AMP
Q19
BUFFER
IC4
Q21
CLAMP
TP2<1>
REF 2V
IC5
IC6,Q22,23<1>
PRE GAMMA
Q24
AMP GAIN SELECT
Q25,27,28
AMP
VR2
R AD
Q28
BUFFER
IC4,Q29
CLAMP
TP3 <1>
OFFSET OB
P3 34
MOTHER(P9601-41B) - SYNC(P1-46A)
AD R
P2 5
MOTHER(P9607-1) -CAMERA SYSCON(P1-52B)
LIMIT R
P3 14
MOTHER(P9601-29B) - CAMERA SYSCON(P1-43A)
CDS(P3003-4)
P1
3
G SH
FL201<2>
LPF (10MHz)
FL202
LPF (4MHz)
Q201
BUFFER
IC201<2>
Q203
BUFFER
(DARK SHADING)
CAMERA SYSCON(P9601-44B)-MOTHER(P9601-44B)
SYNC(P1-44B)-MOTHER(P9601-30B)
CAMERA SYSCON(P1-48A)-MOTHER(P9601-37A)
CAMERA SYSCON(P1-44B)-MOTHER(P9601-37B)
25 DS G
17 TEST G
26 WS G
27 PED G
(WHITE SHADING)
Q204 Q206 Q207
AMP
Q208
30dB ON/OFF
IC202 Q209
CLAMP
Q210<2>
BLANKING
<BLK1>
Q211
-3dB ON/OFF
<-3DB SW>
IC203<2>
WHITE SHADING & GAIN CONTROL
<WS G>
VR204
G BAL
<PED G>
VR201
G PED
Q212~215
GAIN SELECT
Q216,218
AMP
Q219
BUFFER
IC204
Q221
CLAMP
TP202<2>
IC205
IC208,Q222,223<2>
PRE GAMMA
Q224
AMP GAIN SELECT
Q225,227, 228
AMP
VR202
G AD
Q228
BUFFER
IC204,Q229
CLAMP
TP203 <2>
AD G
P2 3
MOTHER(P9607-3) -CAMERA SYSCON(P1-53B)
LIMIT G
P3 28
MOTHER(P9601-38A) - CAMERA SYSCON(P1-44A)
CDS(P3003-2)
P1
5
B SH
FL401<3>
LPF (10MHz)
FL402
LPF (4MHz)
Q401
BUFFER
IC401<3>
Q403
BUFFER
(DARK SHADING)
CAMERA SYSCON(P1-49B)-MOTHER(P9601-40A)
SYNC(P1-46B)-MOTHER(P9601-31B)
CAMERA SYSCON(P1-49A)-MOTHER(P9601-39B)
CAMERA SYSCON(P1-42A)-MOTHER(P9601-42A)
CAMERA SYSCON(P1-45B)-MOTHER(P9601-40B)
29 DS B
18 TEST B
30 WS B
31 AWB B
32 PED B
(WHITE SHADING)
CAMERA SYSCON(P1-28A,B,29A,B)-MOTHER(P9601-32B,33A,B,34A)
20~23 GSTEP 1~4
Q404,406,407
AMP
Q408
30dB ON/OFF
IC402 Q409
CLAMP
Q410<3>
BLANKING
<BLK1>
Q411
-3dB ON/OFF
<-3DB SW>
IC403<3>
WHITE SHADING & GAIN CONTROL
<WS B>
<AWB B>
VR404
B BAL
<PED B>
VR403
B TRACK
VR401
B PED
Q412~415
GAIN SELECT
Q416,418
AMP
Q419
BUFFER
IC404
Q421
CLAMP
TP402<3>
IC405
IC406,Q422,423<3>
PRE GAMMA
Q424
AMP GAIN SELECT
Q425,427, 428
AMP
VR402
B AD
Q428
BUFFER
IC404,Q429
CLAMP
TP403 <3>
AD B
P2 1
MOTHER(P9607-5) -CAMERA SYSCON(P1-54B)
LIMIT B
P3 33
MOTHER(P9601-42A) - CAMERA SYSCON(P1-45A)
IC603<4>
GAMMA BIAS
Q602,IC601<4>
GAMMA SELECT
GAMMA SW
P3 6
MOTHER(P9601-25B) -CAMERA SYSCON(P1-37A)
REF2V
IC607<4>
CLAMP PULSE GEN
<CP1>
<CP2>
<CP3>
<BLK2>
P3
SYNC(P1-79B)-MOTHER(P9601-23B)
SYNC(P1-80B)-MOTHER(P9601-23A)
SYNC(P1-80A)-MOTHER(P9601-24A)
SYNC(P1-24B)-MOTHER(P9601-24B)
CAMERA SYSCON(P1-36A)-MOTHER(P9601-34B)
2 CPOB1
3 CPOB2
5 ADCP
4 BLK
24 -3DB SW

## CCD P.C.Board

This Board has three CCDs and CCD drive circuits for RGB processes.

**IC101** and **IC102** make the drive pulses for R CCD.

**XVA1∼4** generated in Pulse P.C.Board are input to **IC101**. Those pulses become V-CCD Drive Pulses for image area **(A1R∼A4R)** with **V1**(16V),**V2**(GND),**V3**(-9V) and **V4**(1V).

**XVB1∼4** generated in Pulse P.C.Board are input to **IC102.** Those pulses become V-CCD Drive Pulses for storage area **(B1R∼B4R)** with **V1**(16V),**V2**(GND),**V3**(-9V) and **V4**(1V). **A1R∼A4R** and **B1R∼B4R** are supplied to **IC103,R CCD.**

**CH1** and **CH2** are charge pulses and added to V-CCD Drive Pulses for image area. **CHS** is shutter pulse and becomes a pulse of 21V in **IC101**. This is added to SUB voltage, **SUB R,** and supplied to **IC103, R CCD**. H-CCD Drive Pulses, **H1R** and **H2R,** are generated in **IC208** from **XH1** and **XH2** and supplied to **IC103, R CCD**. Reset Pulse is generated in **IC207** from **XR** and **R DC** and supplied to **IC103, R CCD**. The output signal from **R CCD** is supplied to CDS P.C.Board via connector **JR**.

**IC201** and **IC202** make the drive pulses for G CCD.

**XVA1∼4** generated in Pulse P.C.Board are input to **IC201**. Those pulses become V-CCD Drive Pulses for image area **(A1G∼A4G)** with **V1**(16V),**V2**(GND),**V3**(-9V) and **V4**(1V).

**XVB1∼4** generated in Pulse P.C.Board are input to **IC202.** Those pulses become V-CCD Drive Pulses for storage area **(B1G∼B4G)** with **V1**(16V),**V2**(GND),**V3**(-9V) and **V4**(1V). **A1G∼A4G** and **B1G∼B4G** are supplied to **IC203,G CCD.**

**CH1** and **CH2** are charge pulses and added to V-CCD Drive Pulses for image area. **CHS** is shutter pulse and becomes a pulse of 21V in **IC201**. This is added to SUB voltage, **SUB G,** and supplied to **IC203, G CCD**. H-CCD Drive Pulses, **H1G** and **H2G,** are generated in **IC208** from **XH1** and **XH2** and supplied to **IC203, G CCD**. Reset Pulse is generated in **IC207** from **XR** and **R DC** and supplied to **IC203, G CCD**. The output signal from **G CCD** is supplied to CDS P.C.Board via connector **JG**.

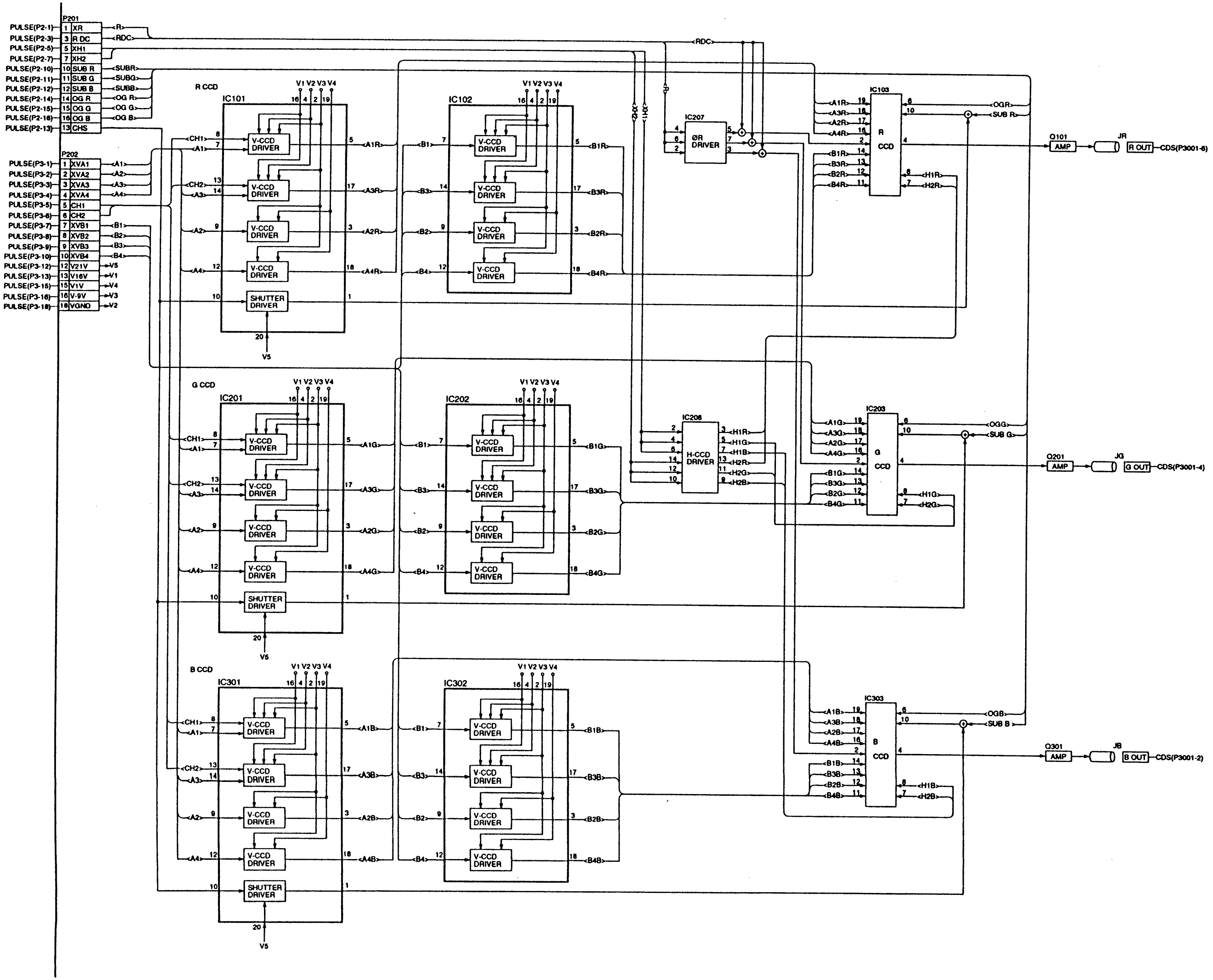
**IC301** and **IC302** make the drive pulses for B CCD.

**XVA1∼4** generated in Pulse P.C.Board are input to **IC301**. Those pulses become V-CCD Drive Pulses for image area **(A1B∼A4B)** with **V1**(16V),**V2**(GND),**V3**(-9V) and **V4**(1V).

**XVB1∼4** generated in Pulse P.C.Board are input to **IC302.** Those pulses become V-CCD Drive Pulses for storage area **(B1B∼B4B)** with **V1**(16V),**V2**(GND),**V3**(-9V) and **V4**(1V). **A1B∼A4B** and **B1B∼B4B** are supplied to **IC303,B CCD.**

**CH1** and **CH2** are charge pulses and added to V-CCD Drive Pulses for image area. **CHS** is shutter pulse and becomes a pulse of 21V in **IC301**. This is added to SUB voltage, **SUB B,** and supplied to **IC303, B CCD**. H-CCD Drive Pulses, **H1B** and **H2B,** are generated in **IC208** from **XH1** and **XH2** and supplied to **IC303, B CCD**. Reset Pulse is generated in **IC207** from **XR** and **R DC** and supplied to **IC303, B CCD**. The output signal from **B CCD** is supplied to CDS P.C.Board via connector **JB**.

# CCD BLOCK DIAGRAM



P201
PULSE(P2-1) 1 XR <R>
PULSE(P2-3) 3 R DC <RDC>
PULSE(P2-5) 5 XH1
PULSE(P2-7) 7 XH2
PULSE(P2-10) 10 SUB R <SUBR>
PULSE(P2-11) 11 SUB G <SUBG>
PULSE(P2-12) 12 SUB B <SUBB>
PULSE(P2-14) 14 OG R <OG R>
PULSE(P2-15) 15 OG G <OG G>
PULSE(P2-16) 16 OG B <OG B>
PULSE(P2-13) 13 CHS
P202
PULSE(P3-1) 1 XVA1 <A1>
PULSE(P3-2) 2 XVA2 <A2>
PULSE(P3-3) 3 XVA3 <A3>
PULSE(P3-4) 4 XVA4 <A4>
PULSE(P3-5) 5 CH1
PULSE(P3-6) 6 CH2
PULSE(P3-7) 7 XVB1 <B1>
PULSE(P3-8) 8 XVB2 <B2>
PULSE(P3-9) 9 XVB3 <B3>
PULSE(P3-10) 10 XVB4 <B4>
PULSE(P3-12) 12 V21V V5
PULSE(P3-13) 13 V16V V1
PULSE(P3-15) 15 V1V V4
PULSE(P3-16) 16 V-9V V3
PULSE(P3-18) 18 VGND V2
R CCD
G CCD
B CCD
IC101
IC102
IC201
IC202
IC301
IC302
V1 V2 V3 V4
16 4 2 19
V-CCD DRIVER
SHUTTER DRIVER
<CH1>
<CH2>
<A1> <A2> <A3> <A4>
<B1> <B2> <B3> <B4>
<A1R> <A3R> <A2R> <A4R>
<B1R> <B3R> <B2R> <B4R>
<A1G> <A3G> <A2G> <A4G>
<B1G> <B3G> <B2G> <B4G>
<A1B> <A3B> <A2B> <A4B>
<B1B> <B3B> <B2B> <B4B>
20
V5
<RDC>
<R>
<XH2>
<XH1>
IC207
ØR DRIVER
IC206
H-CCD DRIVER
<H1R> <H1G> <H1B> <H2R> <H2G> <H2B>
IC103
R CCD
IC203
G CCD
IC303
B CCD
<OGR> <SUB R>
<OGG> <SUB G>
<OGB> <SUB B>
Q101 AMP
JR R OUT CDS(P3001-6)
Q201 AMP
JG G OUT CDS(P3001-4)
Q301 AMP
JB B OUT CDS(P3001-2)

## Camera Syscon P.C.Board

This circuit which is composed of following ICs controls Camera unit and EVR.

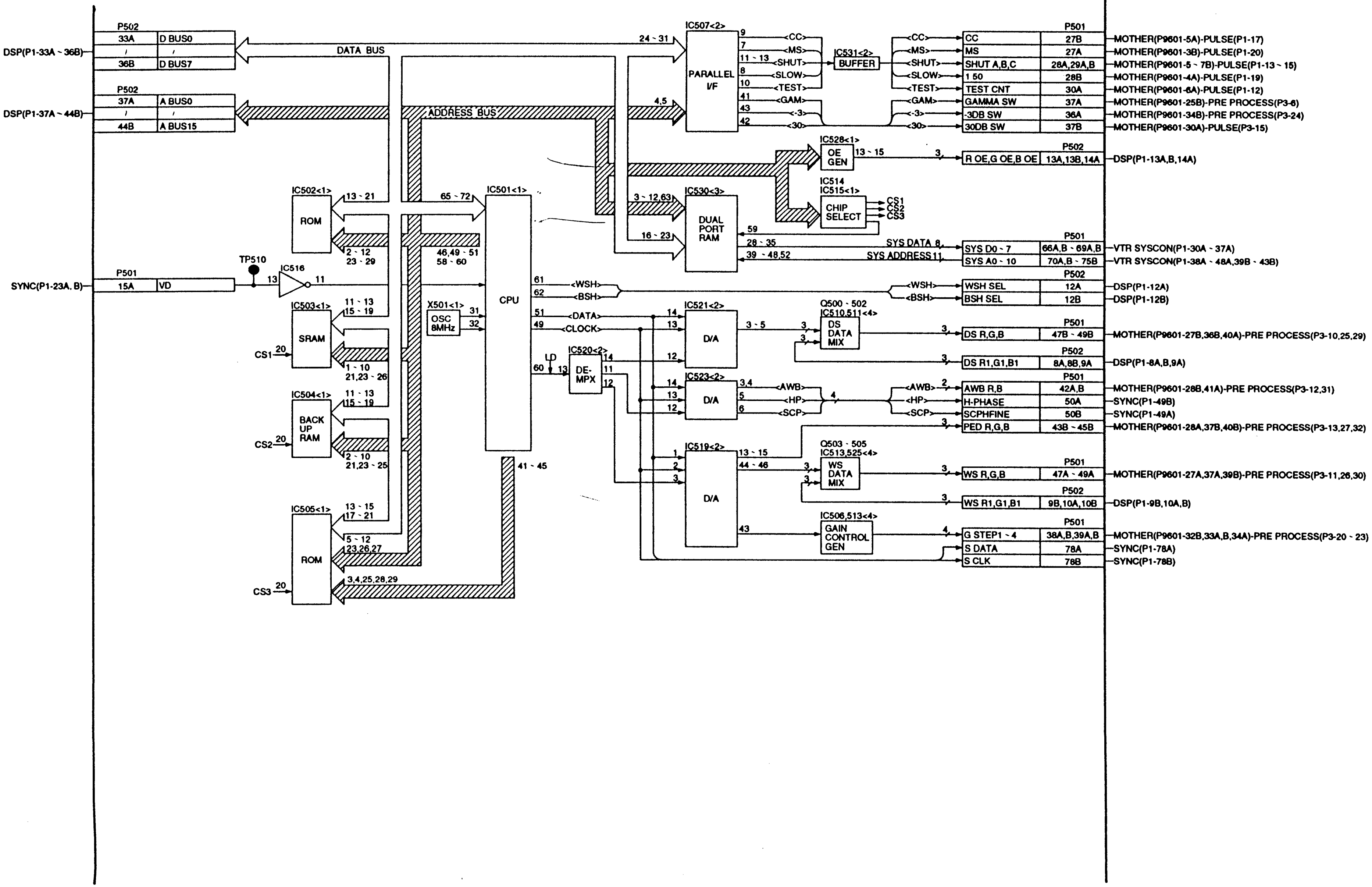
| | |
|---|---|
| **IC501** | SYSCON CPU |
| **IC502** | SYSCON ROM |
| **IC504** | Back-up RAM |
| **IC507** | Parallel I/F to change Mode |
| **IC530** | Dual Port RAM for communication with VTR SYSCON |

**IC521** is D/A converter for Dark Shading data. This is supplied to **DS DATA MIX** which is composed of **Q500 ～ Q502, IC510** and **IC511**. The data is added to RGB of **DS R1,G1,B1** and output as **DS R,G,B.**

**IC519** is D/A converter for White Shading data. This is supplied to **WS DATA MIX** which is composed of **Q503 ～ Q505, IC513** and **IC525**. The data is added to RGB of **WS R1,G1,B1** and output as **WS R,G,B.**

The data of AWB, H phase and sub-carrier are D/A converted at **IC523**. Each of those is output as **AWB ,R B, H-PHASE** and **SCPHASE.**

# CAMERA SYSCON BLOCK DIAGRAM



DSP(P1-33A ~ 36B)
P502 33A D BUS0
36B D BUS7
DATA BUS
DSP(P1-37A ~ 44B)
P502 37A A BUS0
44B A BUS15
ADDRESS BUS
SYNC(P1-23A, B)
P501 15A VD
TP510
IC516
IC502<1> ROM
IC503<1> SRAM
CS1
IC504<1> BACK UP RAM
CS2
IC505<1> ROM
CS3
X501<1> OSC 8MHz
IC501<1> CPU
IC520<2> DE-MPX
LD
IC507<2> PARALLEL I/F
IC531<2> BUFFER
IC528<1> OE GEN
IC514 IC515<1> CHIP SELECT
CS1 CS2 CS3
IC530<3> DUAL PORT RAM
SYS DATA 8
SYS ADDRESS 11
IC521<2> D/A
IC523<2> D/A
IC519<2> D/A
Q500 ~ 502 IC510,511<4> DS DATA MIX
Q503 ~ 505 IC513,525<4> WS DATA MIX
IC506,513<4> GAIN CONTROL GEN
<CC> <MS> <SHUT> <SLOW> <TEST> <GAM> <-3> <30>
<WSH> <BSH> <DATA> <CLOCK>
<AWB> <HP> <SCP>
P501 CC 27B —MOTHER(P9601-5A)-PULSE(P1-17)
MS 27A —MOTHER(P9601-3B)-PULSE(P1-20)
SHUT A,B,C 28A,29A,B —MOTHER(P9601-5 ~ 7B)-PULSE(P1-13 ~ 15)
1 50 28B —MOTHER(P9601-4A)-PULSE(P1-19)
TEST CNT 30A —MOTHER(P9601-6A)-PULSE(P1-12)
GAMMA SW 37A —MOTHER(P9601-25B)-PRE PROCESS(P3-6)
-3DB SW 36A —MOTHER(P9601-34B)-PRE PROCESS(P3-24)
30DB SW 37B —MOTHER(P9601-30A)-PULSE(P3-15)
P502 R OE,G OE,B OE 13A,13B,14A —DSP(P1-13A,B,14A)
P501 SYS D0 ~ 7 66A,B ~ 69A,B —VTR SYSCON(P1-30A ~ 37A)
SYS A0 ~ 10 70A,B ~ 75B —VTR SYSCON(P1-38A ~ 48A,39B ~ 43B)
P502 WSH SEL 12A —DSP(P1-12A)
BSH SEL 12B —DSP(P1-12B)
P501 DS R,G,B 47B ~ 49B —MOTHER(P9601-27B,36B,40A)-PRE PROCESS(P3-10,25,29)
P502 DS R1,G1,B1 8A,8B,9A —DSP(P1-8A,B,9A)
P501 AWB R,B 42A,B —MOTHER(P9601-28B,41A)-PRE PROCESS(P3-12,31)
H-PHASE 50A —SYNC(P1-49B)
SCPHFINE 50B —SYNC(P1-49A)
PED R,G,B 43B ~ 45B —MOTHER(P9601-28A,37B,40B)-PRE PROCESS(P3-13,27,32)
P501 WS R,G,B 47A ~ 49A —MOTHER(P9601-27A,37A,39B)-PRE PROCESS(P3-11,26,30)
P502 WS R1,G1,B1 9B,10A,10B —DSP(P1-9B,10A,B)
P501 G STEP1 ~ 4 38A,B,39A,B —MOTHER(P9601-32B,33A,B,34A)-PRE PROCESS(P3-20 ~ 23)
S DATA 78A —SYNC(P1-78A)
S CLK 78B —SYNC(P1-78B)

## DSP P.C.Board

DSP is the abbreviation of Digital Signal Processor and processes Blemish Compensation, Gamma, Knee, Masking, Detail and so on at **IC101** and **IC102.**

**AD R,AD G** and **AD B** supplied from Pre Process P.C.Board are A/D converted to 10bits of parallel signals at **IC4,IC5** and **IC6. VR1** adjusts the reference voltage for A/D conversion. R,G, and B converted to digital signal are supplied to **IC101.** On the other hand Dark Shading data is supplied to **IC301,SRAM,** via **IC302** and **IC305.** White Shading data is also supplied to **IC304,SRAM,** via **IC302** and **IC305.** Both are D/A converted at **IC303** and **IC306** and then supplied to Camera Syscon P.C.Board.

R、G、B input to **IC101** are processed with Blemish Compensation, Gamma, Knee and Masking. Then they are supplied to **IC102.** At the same time the detail signal made inside **IC101** are processed with Level Dependent, Dynamic Noise Suppress and Dynamic Detail at **IC102.**

1/2 pitch of CCD spatial offsets is compensated in **IC102.** Moreover Chroma Detail and Fresh(Skin) Detail are produced from R,G and B and then added to R,G and B as well as ordinary details mentioned above.

The multiplexers after 1/2 pitch of CCD spatial offsets compensation switch input signal or internal color bar.

After that Clipping and Blanking are performed.

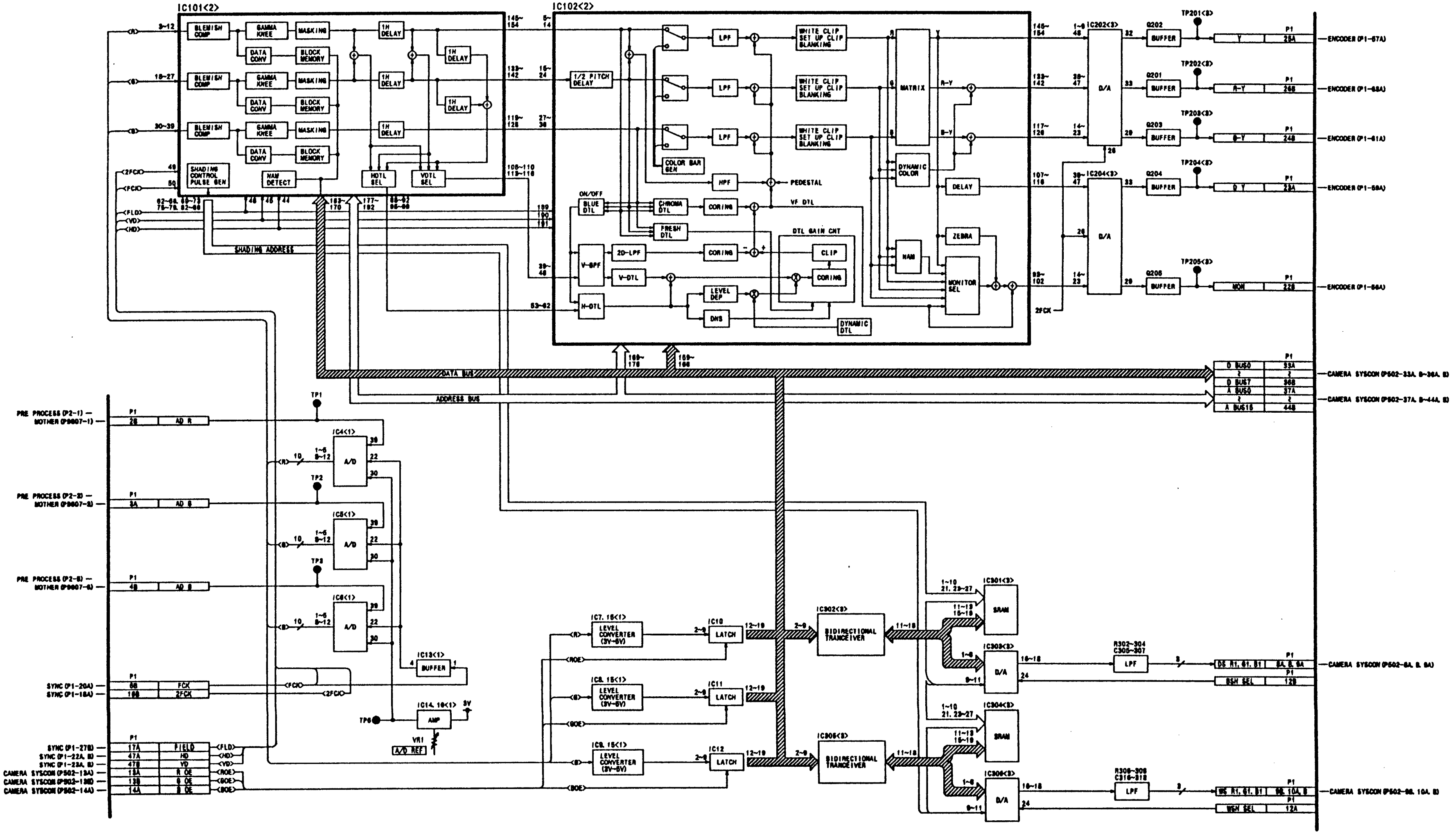
**MATRIX** converts **RGB** to **Y/R-Y/B-Y.**

Outputs from **145th～154th** pins are **Y, 133th～142nd** pins are **R-Y,** and **117th～126th** pins are **B-Y.** All of those are converted to analog signals at **IC202** and supplied to Encoder P.C.Board.

**D Y** output from **107th～116th** pins are delayed Y signal which is required to encode composite signal in Encoder P.C.Board.

Outputs from **93th～102nd** pins are Y,R,G,B or NAM for EVF which have ZEBRA. This is converted to analog signal at **IC204** and supplied to Encoder P.C.Board.

# DSP BLOCK DIAGRAM


IC101<2>
BLEMISH COMP
GAMMA KNEE
MASKING
DATA CONV
BLOCK MEMORY
1H DELAY
SHADING CONTROL PULSE GEN
NAM DETECT
HDTL SEL
VDTL SEL
<R>
<G>
<B>
<2FCK>
<FCK>
<FLD>
<VD>
<HD>
3~12
18~27
30~39
49
50
62~68, 69~73
75~79, 82~88
146
145
144
163~170
177~192
88~92
95~98
SHADING ADDRESS
145~154
133~142
119~128
108~110
113~116
IC102<2>
5~14
15~24
27~36
189
190
191
39~48
53~62
1/2 PITCH DELAY
LPF
WHITE CLIP SET UP CLIP BLANKING
COLOR BAR GEN
HPF
PEDESTAL
ON/OFF
BLUE DTL
CHROMA DTL
FRESH DTL
CORING
VF DTL
V-BPF
2D-LPF
V-DTL
H-DTL
LEVEL DEP
DNS
DTL GAIN CNT
CLIP
DYNAMIC DTL
MATRIX
R
G
B
Y
R-Y
B-Y
DYNAMIC COLOR
DELAY
ZEBRA
NAM
MONITOR SEL
163~170
159~168
145~154
133~142
117~126
107~116
93~102
2FCK
IC202<3>
IC204<3>
D/A
1~9
48
38~47
14~23
32
33
29
26
TP201<3>
TP202<3>
TP203<3>
TP204<3>
TP205<3>
Q202
Q201
Q203
Q204
Q205
BUFFER
P1
Y
25A
R-Y
26B
B-Y
24B
D Y
23A
MON
22B
ENCODER (P1-67A)
ENCODER (P1-68A)
ENCODER (P1-61A)
ENCODER (P1-59A)
ENCODER (P1-56A)
DATA BUS
ADDRESS BUS
D BUS0
D BUS7
A BUS0
A BUS15
33A
36B
37A
44B
CAMERA SYSCON (P502-33A, B~36A, B)
CAMERA SYSCON (P502-37A, B~44A, B)
PRE PROCESS (P2-1) —
MOTHER (P9607-1) —
PRE PROCESS (P2-3) —
MOTHER (P9607-3) —
PRE PROCESS (P2-5) —
MOTHER (P9607-5) —
2B
AD R
3A
AD G
4B
AD B
TP1
TP2
TP3
TP6
IC4<1>
IC5<1>
IC6<1>
A/D
10
1~6
8~12
39
22
30
IC13<1>
BUFFER
4
1
IC14, 16<1>
AMP
5V
VR1
A/D REF
SYNC (P1-20A) —
SYNC (P1-18A) —
6B
FCK
16B
2FCK
SYNC (P1-27B) —
SYNC (P1-22A, B) —
SYNC (P1-23A, B) —
CAMERA SYSCON (P502-13A) —
CAMERA SYSCON (P502-13B) —
CAMERA SYSCON (P502-14A) —
17A
FIELD
47A
HD
47B
VD
13A
R OE
13B
G OE
14A
B OE
<ROE>
<GOE>
<BOE>
IC7, 15<1>
IC8, 15<1>
IC9, 15<1>
LEVEL CONVERTER (3V-5V)
IC10
IC11
IC12
LATCH
2~9
12~19
IC302<3>
IC305<3>
BIDIRECTIONAL TRANCEIVER
11~18
IC301<3>
IC304<3>
SRAM
1~10
21, 23~27
11~13
15~19
IC303<3>
IC306<3>
1~8
9~11
16~18
24
R302~304
C305~307
R306~308
C310~312
LPF
3
DS R1, G1, B1
8A, B, 9A
BSH SEL
12B
WS R1, G1, B1
9B, 10A, B
WSH SEL
12A
CAMERA SYSCON (P502-8A, B, 9A)
CAMERA SYSCON (P502-9B, 10A, B)

## Encoder P.C.Board

Encoder converts inputs from DSP to composite and component signals.

**IC4** is an encoder. **D** Y(Y for composite) is input to **8th** pin, **R-Y** to **24th** pin, and **B-Y** to **1st** pin.

**VR106** adjusts the level of **D Y.** Sync. **ASYNC N** is added to **D Y. D Y** goes to **IC4. VR105** adjusts the level of sync.

**R-Y** is adjusted in level with **VR201** and supplied to **IC4.** On the other hand it is output as Pr signal **PR V**, **PR 26P. PR V** is to be recorded in AJ-D700. **PR 26P** is to be output via 26 pins connector(Option).

**SW201** selects M2 level or $\beta$ cam level for 26 pins connector.

**B-Y** is adjusted in level with **VR202** and supplied to **IC4.** On the other hand it is output as Pb signal **PB V**, **PB 26P. PB V** is to be recorded in AJ-D700. **PB 26P** is to be output via 26 pins connector(Option).

**SW202** selects M2 level or $\beta$ cam level for 26 pins connector.

Sub-carriers are supplied to **IC4** as **PR SC** and **PB SC. ABF** is Burst signal and is adjusted in level with **VR6.**

R-Y and B-Y are modulated to C signal at **IC4. VR10** adjusts the C level. C signal returns to **IC4** and encoded with Y. Mixed signal is output from **12th** pin. After DC(**VR11**) and level(**VR12**) are adjusted, composite signal has three ways; **CAM OUT, CAM 26P** for 26 pins connector, **MON OUT** for VIDEO OUT connector. **VR401** adjusts the level of **MON OUT.**

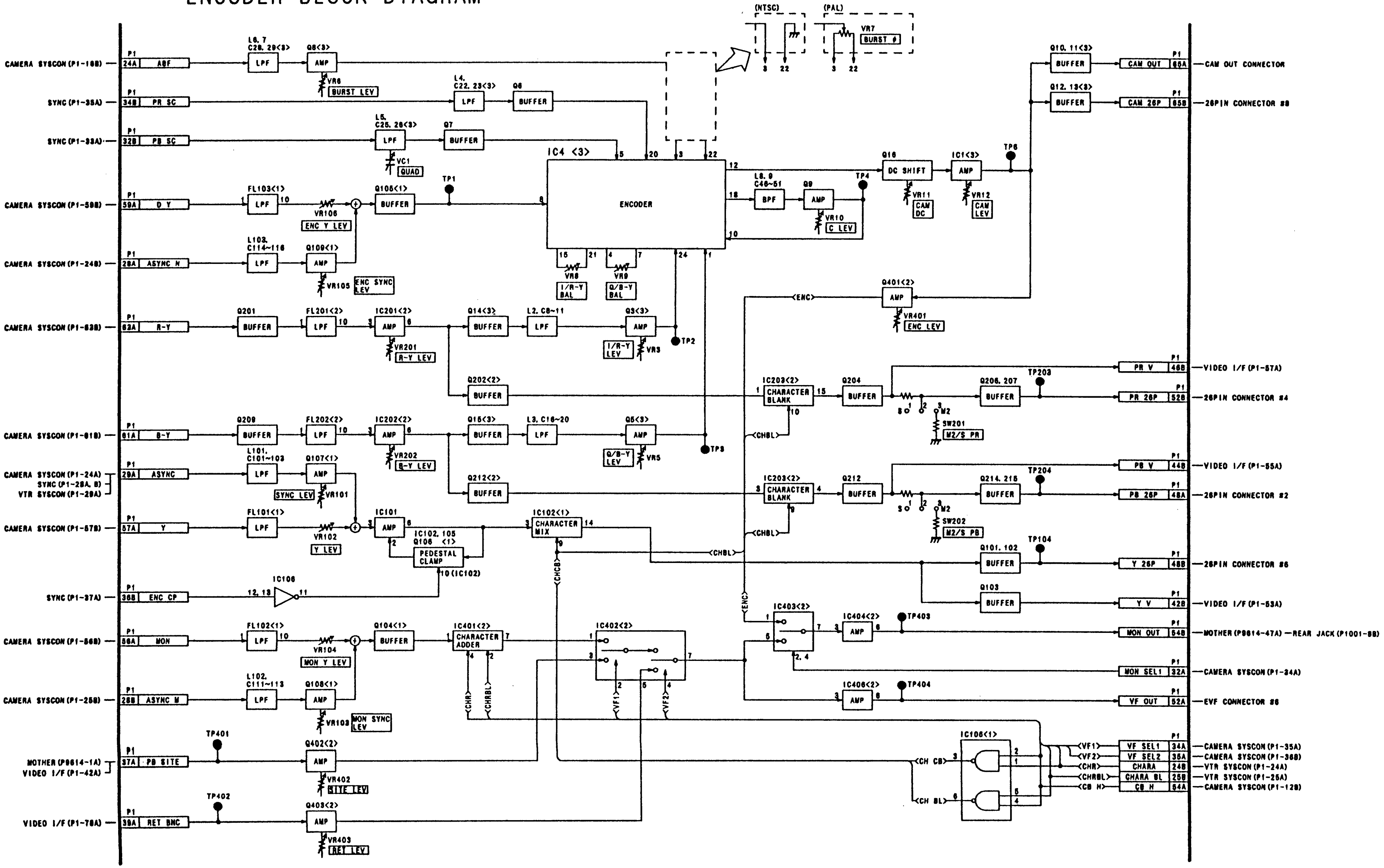
**VR102** adjusts the level of ordinary **Y.** Then sync., **ASYNC,** is added to **Y. VR101** adjusts the level of sync. After pedestal is added at **IC101,** Y is output as **Y V** and **Y 26P. Y V** is to be recorded in AJ-D700. **Y 26P** is to be output via 26 pins connector(Option).

**MON** is Y,R,G,B or NAM for EVF and is adjusted in level with **VR104.** Sync.,**ASYNC M,** is added to that signal. Sync level is adjusted with **VR103. IC401** adds superimpose. **IC402** selects **PB SITE** for playback or **RET BNC** for Return. After that the signal is supplied to EVF as **VF OUT.** On the other hand **IC403** selects VF signal or composite signal for VIDEO OUT connector at **IC403.** The selected signal is supplied to Rear Jack P.C.Board as **MON OUT.**

**VR402** adjusts the level of PB signal.

**VR403** adjusts the level of RETURN input.

# ENCODER BLOCK DIAGRAM


CAMERA SYSCON (P1-16B)
P1 24A ABF
L6, 7 C28, 29<3>
LPF
Q8<3>
AMP
VR6
BURST LEV
SYNC (P1-35A)
P1 34B PR SC
L4, C22, 23<3>
LPF
Q6
BUFFER
SYNC (P1-33A)
P1 32B PB SC
L5, C25, 26<3>
LPF
Q7
BUFFER
VC1
QUAD
(NTSC)
(PAL)
VR7
BURST ϕ
3
22
IC4 <3>
ENCODER
5
20
3
22
12
18
10
8
15
21
4
7
24
1
VR8
I/R-Y BAL
VR9
Q/B-Y BAL
L8, 9 C46~51
BPF
Q9
AMP
VR10
C LEV
TP4
Q16
DC SHIFT
VR11
CAM DC
IC1<3>
AMP
VR12
CAM LEV
TP6
Q10, 11<3>
BUFFER
P1 CAM OUT 65A
—CAM OUT CONNECTOR
Q12, 13<3>
BUFFER
P1 CAM 26P 65B
—26PIN CONNECTOR #8
CAMERA SYSCON (P1-59B)
P1 59A D Y
FL103<1>
LPF
VR106
ENC Y LEV
Q105<1>
BUFFER
TP1
CAMERA SYSCON (P1-24B)
P1 28A ASYNC N
L103, C114~116
LPF
Q109<1>
AMP
VR105
ENC SYNC LEV
Q401<2>
AMP
VR401
ENC LEV
<ENC>
CAMERA SYSCON (P1-63B)
P1 63A R-Y
Q201
BUFFER
FL201<2>
LPF
IC201<2>
AMP
VR201
R-Y LEV
Q14<3>
BUFFER
L2, C8~11
LPF
Q3<3>
AMP
I/R-Y LEV
VR3
TP2
Q202<2>
BUFFER
IC203<2>
CHARACTER BLANK
Q204
BUFFER
SW201
M2/S PR
Q206, 207
BUFFER
TP203
P1 PR V 46B
—VIDEO I/F (P1-57A)
P1 PR 26P 52B
—26PIN CONNECTOR #4
CAMERA SYSCON (P1-61B)
P1 61A B-Y
Q209
BUFFER
FL202<2>
LPF
IC202<2>
AMP
VR202
B-Y LEV
Q15<3>
BUFFER
L3, C16~20
LPF
Q5<3>
AMP
Q/B-Y LEV
VR5
TP3
<CHBL>
CAMERA SYSCON (P1-24A)
SYNC (P1-28A, B)
VTR SYSCON (P1-29A)
P1 29A ASYNC
L101, C101~103
LPF
Q107<1>
AMP
SYNC LEV
VR101
Q212<2>
BUFFER
IC203<2>
CHARACTER BLANK
Q212
BUFFER
SW202
M2/S PB
Q214, 215
BUFFER
TP204
P1 PB V 44B
—VIDEO I/F (P1-55A)
P1 PB 26P 48A
—26PIN CONNECTOR #2
CAMERA SYSCON (P1-57B)
P1 57A Y
FL101<1>
LPF
VR102
Y LEV
IC101
AMP
IC102, 105 Q106 <1>
PEDESTAL CLAMP
10 (IC102)
IC102<1>
CHARACTER MIX
<CHCB>
Q101, 102
BUFFER
TP104
P1 Y 26P 46B
—26PIN CONNECTOR #6
SYNC (P1-37A)
P1 36B ENC CP
IC106
12, 13
11
Q103
BUFFER
P1 Y V 42B
—VIDEO I/F (P1-53A)
<ENC>
IC403<2>
IC404<2>
AMP
TP403
P1 MON OUT 54B
—MOTHER (P9614-47A) —REAR JACK (P1001-8B)
CAMERA SYSCON (P1-56B)
P1 56A MON
FL102<1>
LPF
VR104
MON Y LEV
Q104<1>
BUFFER
IC401<2>
CHARACTER ADDER
IC402<2>
<CHR>
<CHRBL>
<VF1>
<VF2>
P1 MON SEL1 32A
—CAMERA SYSCON (P1-34A)
CAMERA SYSCON (P1-25B)
P1 28B ASYNC M
L102, C111~113
LPF
Q108<1>
AMP
VR103
MON SYNC LEV
IC406<2>
AMP
TP404
P1 VF OUT 52A
—EVF CONNECTOR #6
IC105<1>
<CH CB>
<CH BL>
P1 VF SEL1 34A
—CAMERA SYSCON (P1-35A)
VF SEL2 35A
—CAMERA SYSCON (P1-36B)
CHARA 24B
—VTR SYSCON (P1-24A)
CHARA BL 25B
—VTR SYSCON (P1-25A)
CB H 54A
—CAMERA SYSCON (P1-12B)
<CB H>
TP401
MOTHER (P9614-1A)
VIDEO I/F (P1-42A)
P1 37A PB SITE
Q402<2>
AMP
VR402
SITE LEV
TP402
VIDEO I/F (P1-78A)
P1 39A RET BNC
Q403<2>
AMP
VR403
RET LEV

## Sync. P.C.Board

This circuit is composed of **IC27** and **IC11**.

**GL IN** is input from GEN LOCK IN connector. Composite sync. separated at **IC34** is supplied to **98th** pin of **IC27** and **85th** pin of **IC11**. Burst signal is separated at **IC2** and **IC3** and supplied to **69th** pin of **IC27**. H SYNC. is separated from the sync. input from **98th** pin of **IC27**. Then H SYNC. is output from **101st** pin. This is adjusted in phase at **IC22** and input again from **43th** pin.

**X4** located at left side of diagram generates reference 4FSC. H sync. is generated based on that 4FSC. This H sync. or **HR**, external input sync. input from **45th** pin is selected at **IC27**. Selected signal is output from **46th** pin as **HO**. **X1** located at top of diagram generates **2FCK** locked to **HO** and then supplied to **IC11**.

**IC11** generates clocks which is used in camera unit and locked to that **2FCK**.

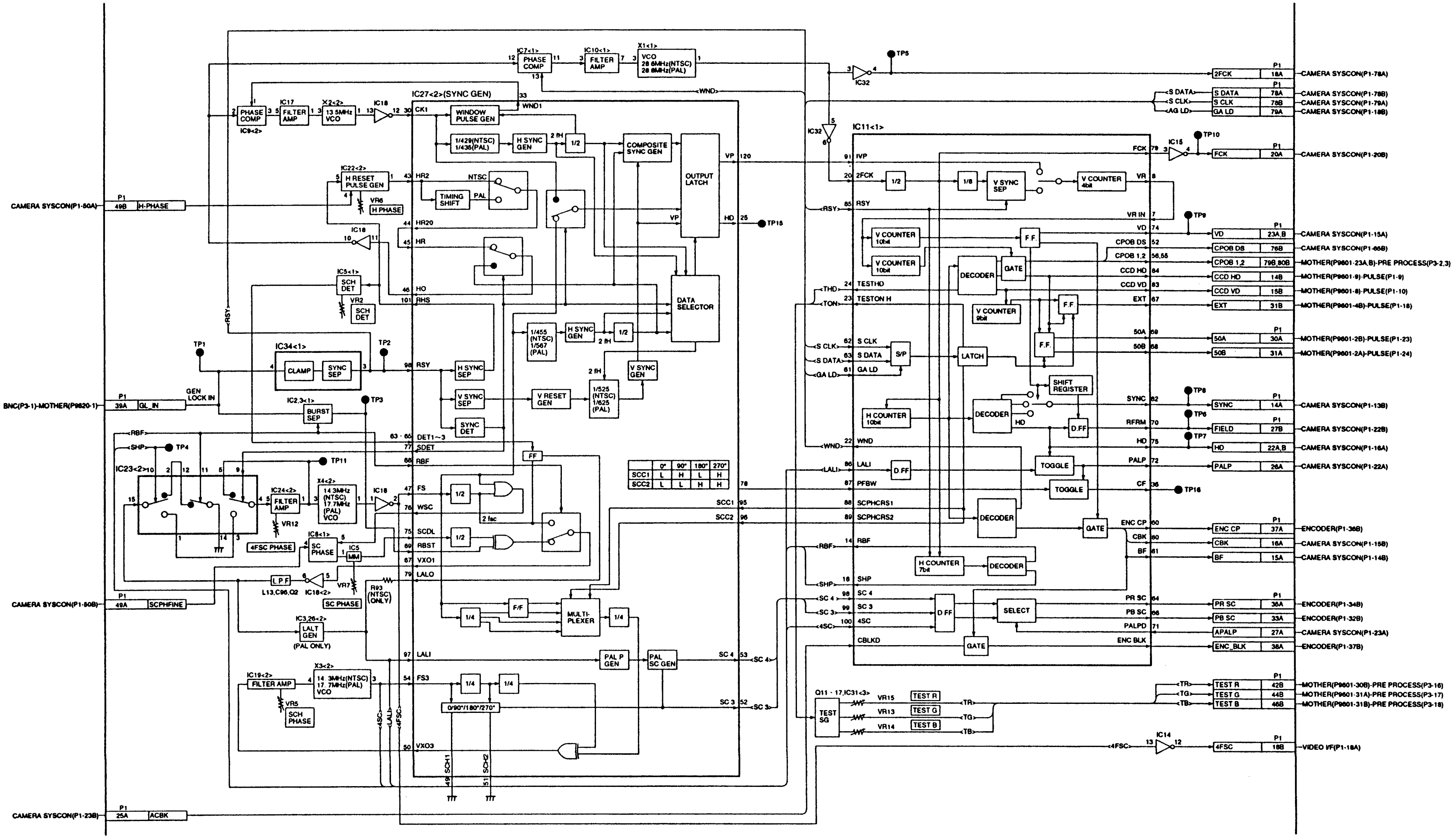
PLL located at top left of diagram which is composed of **IC9** of phase comparator and **X2** of 13.5MHz oscillator drives **IC27**.

PLL located at bottom left of diagram which is composed of **IC19** of phase comparator and **X3** of oscillator adjusts SCH.

The signals at **95th** and **96th** pins of **IC27** are used for sub-carrier adjustment.

**Q11～Q17** and **IC31** generate Ramp signal for testing which is adjusted in level with **VR13～VR15**.

## CAMERA SYNC BLOCK DIAGRAM


IC7<1> PHASE COMP
IC10<1> FILTER AMP
X1<1> VCO 28.6MHz(NTSC) 28.8MHz(PAL)
TP5
IC32
IC9<2> PHASE COMP
IC17 FILTER AMP
X2<2> 13.5MHz VCO
IC18
IC27<2>(SYNC GEN)
CK1
WND1
WINDOW PULSE GEN
1/429(NTSC) 1/435(PAL)
H SYNC GEN
1/2
COMPOSITE SYNC GEN
OUTPUT LATCH
VP
HD
TP15
IC22<2> H RESET PULSE GEN
VR6 H PHASE
HR2
NTSC
PAL
TIMING SHIFT
HR20
HR
HO
RHS
IC5<1> SCH DET
VR2 SCH DET
DATA SELECTOR
1/455 (NTSC) 1/567 (PAL)
H SYNC GEN
1/2
2 fH
RSY
TP1
TP2
IC34<1>
CLAMP
SYNC SEP
GEN LOCK IN
H SYNC SEP
V SYNC SEP
V RESET GEN
1/525 (NTSC) 1/625 (PAL)
V SYNC GEN
SYNC DET
IC2,3<1> BURST SEP
TP3
DET1~3
SDET
RBF
FF
TP4
TP11
IC23<2>
IC24<2> FILTER AMP
VR12
X4<2> 14.3MHz (NTSC) 17.7MHz (PAL) VCO
IC18
FS
WSC
SCDL
RBST
VXO1
LALO
1/2
2 fsc
4FSC PHASE
IC6<1> SC PHASE
IC5 MM
L.P.F
L13,C96,Q2
IC18<2>
VR7
R93 (NTSC ONLY)
SC PHASE
IC3,26<2> LALT GEN (PAL ONLY)
1/4
F/F
MULTI-PLEXER
1/4
LALI
PAL P GEN
PAL SC GEN
SC 4
IC19<2> FILTER AMP
X3<2> 14.3MHz(NTSC) 17.7MHz(PAL) VCO
VR5 SCH PHASE
FS3
1/4
1/4
0/90°/180°/270°
SC 3
VXO3
SCH1
SCH2
SCC1
SCC2
0° | 90° | 180° | 270°
SCC1 | L | H | L | H
SCC2 | L | L | H | H
CAMERA SYSCON(P1-50A) P1 49B H-PHASE
BNC(P3-1)-MOTHER(P9620-1) P1 39A GL_IN
CAMERA SYSCON(P1-50B) P1 49A SCPHFINE
CAMERA SYSCON(P1-23B) P1 25A ACBK
IC11<1>
FCK
IC15
TP10
IVP
2FCK
1/2
1/8
V SYNC SEP
V COUNTER 4bit
VR
VR IN
TP9
VD
CPOB DS
CPOB 1,2
CCD HD
CCD VD
EXT
V COUNTER 10bit
V COUNTER 10bit
F.F.
DECODER
GATE
V COUNTER 9bit
F.F
F.F.
TESTHD
TESTON H
THD
TON
S CLK
S DATA
GA LD
S/P
LATCH
SHIFT REGISTER
H COUNTER 10bit
DECODER
D.FF
SYNC
RFRM
TP8
TP6
TP7
WND
LALI
D.FF
PFBW
TOGGLE
TOGGLE
PALP
CF
TP16
SCPHCRS1
SCPHCRS2
DECODER
GATE
ENC CP
CBK
BF
RBF
H COUNTER 7bit
DECODER
SHP
SC 4
SC 3
4SC
D FF
SELECT
PR SC
PB SC
PALPD
CBLKD
GATE
ENC BLK
Q11 - 17,IC31<3>
TEST SG
VR15 TEST R
VR13 TEST G
VR14 TEST B
TR
TG
TB
IC14
4FSC
2FCK P1 18A CAMERA SYSCON(P1-78A)
S DATA P1 78A CAMERA SYSCON(P1-78B)
S CLK 78B CAMERA SYSCON(P1-79A)
GA LD 79A CAMERA SYSCON(P1-18B)
FCK P1 20A CAMERA SYSCON(P1-20B)
VD P1 23A,B CAMERA SYSCON(P1-15A)
CPOB DS 76B CAMERA SYSCON(P1-66B)
CPOB 1,2 79B,80B MOTHER(P9601-23A,B)-PRE PROCESS(P3-2,3)
CCD HD 14B MOTHER(P9601-9)-PULSE(P1-9)
CCD VD 15B MOTHER(P9601-8)-PULSE(P1-10)
EXT 31B MOTHER(P9601-4B)-PULSE(P1-18)
50A P1 30A MOTHER(P9601-2B)-PULSE(P1-23)
50B 31A MOTHER(P9601-2A)-PULSE(P1-24)
SYNC P1 14A CAMERA SYSCON(P1-13B)
FIELD P1 27B CAMERA SYSCON(P1-22B)
HD 22A,B CAMERA SYSCON(P1-16A)
PALP 26A CAMERA SYSCON(P1-22A)
ENC CP P1 37A ENCODER(P1-36B)
CBK 16A CAMERA SYSCON(P1-15B)
BF 15A CAMERA SYSCON(P1-14B)
PR SC P1 35A ENCODER(P1-34B)
PB SC 33A ENCODER(P1-32B)
APALP 27A CAMERA SYSCON(P1-23A)
ENC_BLK 38A ENCODER(P1-37B)
TEST R P1 42B MOTHER(P9601-30B)-PRE PROCESS(P3-16)
TEST G 44B MOTHER(P9601-31A)-PRE PROCESS(P3-17)
TEST B 46B MOTHER(P9601-31B)-PRE PROCESS(P3-18)
4FSC P1 18B VIDEO I/F(P1-18A)

## Video I/F P.C.Board

VIDEO I/F is the interface between camera unit and VTR unit.

**Y V** is input from Encoder. **IC101** selects **Y V** or special signal for factory. **IC101** is switched by **SG L** which is always high. After **VR104** adjusts the level, Y is converted to digital signal at **IC208**. DC level of clamp depends on **VR203**.

Sync. is separated from Y at **IC201**. PLL is composed of **IC205** of phase comparator, **X201** of 13.5MHz oscillator and **IC301**. This PLL generates the reference clock locked to input signal.

**PB V** is input from Encoder. **IC102** selects **PB V** or special signal for factory. After **VR107** adjusts the timing and **VR108** adjusts the level, Pb is converted to digital signal at **IC207**. DC level of clamp depends on **VR204**.

**PR V** is input from Encoder. **IC104** selects **PR V** or special signal for factory. After **VR111** adjusts the timing and **VR112** adjusts the level, Pr is converted to digital signal at **IC212**. DC level of clamp depends on **VR205**.

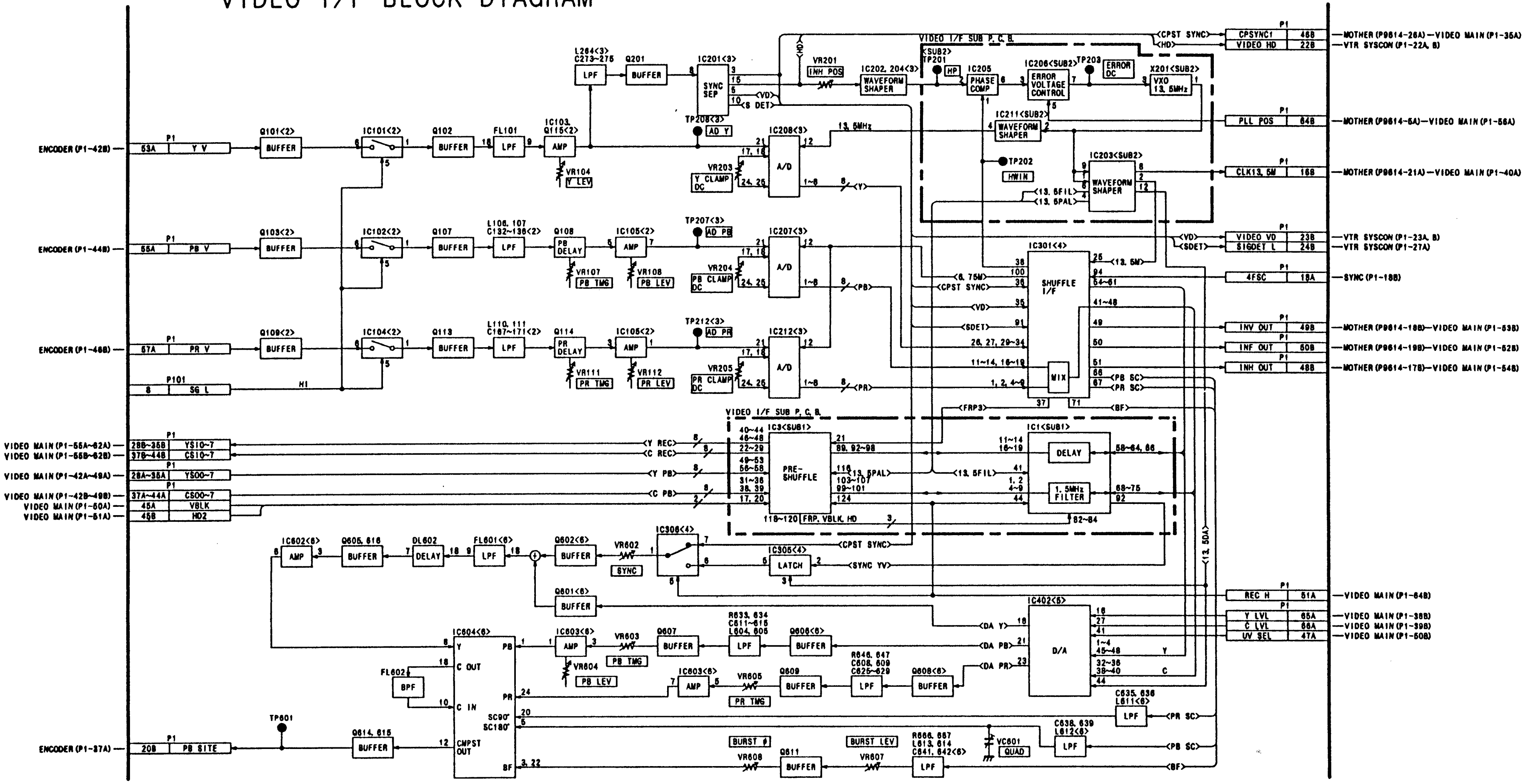
**Y, Pb** and **Pr** converted to 8bits of digital signal are supplied to **IC301**. Pb and Pr are mixed and supplied to **IC1** which is a filter on Video I/F sub P.C.Board as **YSI** and **CSI**. Each of those is 8bits of digital signal. **IC3,** Pre-shuffle on Video I/F sub P.C.Board, assigns data allocation because chroma data is thinned in Shuffle IC of Video Main circuit.

**IC402** is a D/A converter where playback signal is mainly processed. Pb level is adjusted with **VR604**. **Y** level and **C** level are adjusted with EVR in the D/A converter. **IC604** is an encoder. **Pb timing** are adjusted with **VR603** and **Pr timing** are adjusted with **VR605**.

**INH OUT** is the pulse locked to input signal, which has the frequency of H. **INV OUT** is the pulse locked to input signal, which has the frequency of V. **INF OUT** is the pulse locked to input signal, which has the frequency of frame.

**S DET** output from **IC201** detection signal which is LOW when sync. is detected in external input.

# VIDEO I/F BLOCK DIAGRAM


ENCODER (P1-42B)
P1
53A
Y V
Q101<2>
BUFFER
IC101<2>
Q102
BUFFER
FL101
LPF
IC103, Q115<2>
AMP
VR104
Y LEV
L264<3>
C273~275
LPF
Q201
BUFFER
IC201<3>
SYNC SEP
<VD>
<S DET>
TP208<3>
AD Y
IC208<3>
A/D
VR203
Y CLAMP DC
13.5MHz
<Y>
ENCODER (P1-44B)
55A
PB V
Q103<2>
BUFFER
IC102<2>
Q107
BUFFER
L106, 107
C132~136<2>
LPF
Q108
PB DELAY
VR107
PB TMG
IC105<2>
AMP
VR108
PB LEV
TP207<3>
AD PB
IC207<3>
A/D
VR204
PB CLAMP DC
<PB>
ENCODER (P1-46B)
57A
PR V
Q109<2>
BUFFER
IC104<2>
Q113
BUFFER
L110, 111
C167~171<2>
LPF
Q114
PR DELAY
VR111
PR TMG
IC105<2>
AMP
VR112
PR LEV
TP212<3>
AD PR
IC212<3>
A/D
VR205
PR CLAMP DC
<PR>
P101
8
SG L
H1
<HD>
VR201
INH POS
IC202, 204<3>
WAVEFORM SHAPER
VIDEO I/F SUB P.C.B.
<SUB2>
TP201
HP
IC205
PHASE COMP
IC206<SUB2>
ERROR VOLTAGE CONTROL
TP203
ERROR DC
X201<SUB2>
VXO 13.5MHz
IC211<SUB2>
WAVEFORM SHAPER
TP202
HWIN
IC203<SUB2>
WAVEFORM SHAPER
<13.5FIL>
<13.5PAL>
<CPST SYNC>
<HD>
P1
CPSYNC1
46B
VIDEO HD
22B
—MOTHER (P9614-26A)—VIDEO MAIN (P1-35A)
—VTR SYSCON (P1-22A, B)
PLL POS
64B
—MOTHER (P9614-5A)—VIDEO MAIN (P1-56A)
CLK13.5M
16B
—MOTHER (P9614-21A)—VIDEO MAIN (P1-40A)
<VD>
<SDET>
VIDEO VD
23B
SIGDET L
24B
—VTR SYSCON (P1-23A, B)
—VTR SYSCON (P1-27A)
IC301<4>
SHUFFLE I/F
MIX
<6.75M>
<CPST SYNC>
<VD>
<SDET>
<13.5M>
<PB SC>
<PR SC>
<FRP3>
<BF>
4FSC
18A
—SYNC (P1-18B)
INV OUT
49B
—MOTHER (P9614-18B)—VIDEO MAIN (P1-53B)
INF OUT
50B
—MOTHER (P9614-19B)—VIDEO MAIN (P1-52B)
INH OUT
48B
—MOTHER (P9614-17B)—VIDEO MAIN (P1-54B)
VIDEO MAIN (P1-55A~62A)
VIDEO MAIN (P1-55B~62B)
VIDEO MAIN (P1-42A~49A)
VIDEO MAIN (P1-42B~49B)
VIDEO MAIN (P1-50A)
VIDEO MAIN (P1-51A)
28B~35B
YS10~7
37B~44B
CS10~7
28A~35A
YS00~7
37A~44A
CS00~7
45A
VBLK
45B
HD2
<Y REC>
<C REC>
<Y PB>
<C PB>
VIDEO I/F SUB P.C.B.
IC3<SUB1>
PRE-SHUFFLE
FRP, VBLK, HD
<13.5PAL>
<13.5FIL>
IC1<SUB1>
DELAY
1.5MHz FILTER
<13.5DA>
IC602<6>
AMP
Q605, 616
BUFFER
DL602
DELAY
FL601<6>
LPF
Q602<6>
BUFFER
VR602
SYNC
IC306<4>
<CPST SYNC>
IC305<4>
LATCH
<SYNC YV>
Q601<6>
BUFFER
REC H
51A
—VIDEO MAIN (P1-64B)
IC402<6>
D/A
<DA Y>
<DA PB>
<DA PR>
Y
C
Y LVL
65A
C LVL
66A
UV SEL
47A
—VIDEO MAIN (P1-38B)
—VIDEO MAIN (P1-39B)
—VIDEO MAIN (P1-50B)
IC604<6>
Y
C OUT
C IN
CMPST OUT
PB
PR
SC90°
SC180°
BF
FL602
BPF
IC603<6>
AMP
VR603
PB TMG
VR604
PB LEV
Q607
BUFFER
R633, 634
C611~615
L604, 605
LPF
Q606<6>
BUFFER
IC603<6>
AMP
VR605
PR TMG
Q609
BUFFER
R646, 647
C608, 609
C625~629
LPF
Q608<6>
BUFFER
C635, 636
L611<6>
LPF
<PR SC>
C638, 639
L612<6>
LPF
<PB SC>
VC601
QUAD
BURST ϕ
VR608
Q611
BUFFER
BURST LEV
VR607
R666, 667
L613, 614
C641, 642<6>
LPF
<BF>
TP601
ENCODER (P1-37A)
20B
PB SITE
Q614, 615
BUFFER

## VTR Syscon P.C.Board

This circuit is composed of CPU, Parallel I/O, Time Code and Character Generator.

Inputs from the operation panel are **ZEBRA, PLAY, STOP, FF, REW, EJECT, START, RET, SHUT, AWB** and **ABB SWs**. Those signals are supplied to **IC1** of CPU, via **IC201** of Parallel I/O.

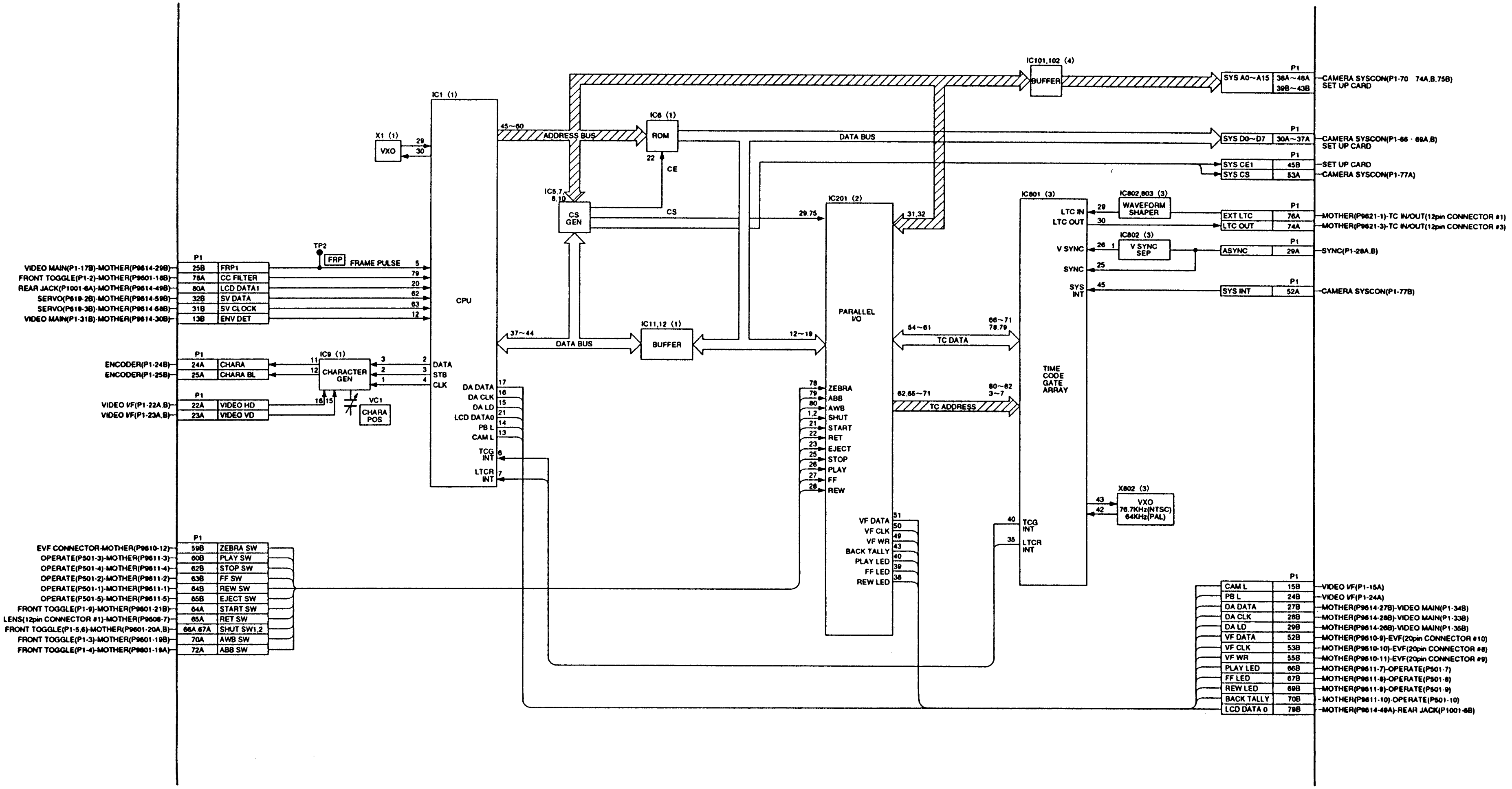
VTR Syscon and Camera Syscon communicate by **SYS A0~A15** and **SYS D0~D7**. SYS A0~A15 are address lines. **SYS D0~D7** are data lines.

**IC9** generates character. The character is supplied to Encoder P.C.Board.

**IC801** is time code gate array which includes time code reader and generator. **29th** pin and **30th** pin are IN/OUT for external TC, which are supplied to 12 pins Multi Connector.

**IC6** is Syscon ROM.

# VTR SYSCON BLOCK DIAGRAM


P1
VIDEO MAIN(P1-17B)-MOTHER(P9614-29B) 25B FRP1
FRONT TOGGLE(P1-2)-MOTHER(P9601-18B) 78A CC FILTER
REAR JACK(P1001-6A)-MOTHER(P9614-49B) 80A LCD DATA1
SERVO(P619-2B)-MOTHER(P9614-59B) 32B SV DATA
SERVO(P619-3B)-MOTHER(P9614-58B) 31B SV CLOCK
VIDEO MAIN(P1-31B)-MOTHER(P9614-30B) 13B ENV DET
TP2
FRP
FRAME PULSE
5
79
20
62
63
12
ENCODER(P1-24B) 24A CHARA
ENCODER(P1-25B) 25A CHARA BL
VIDEO VF(P1-22A,B) 22A VIDEO HD
VIDEO VF(P1-23A,B) 23A VIDEO VD
IC9 (1)
CHARACTER GEN
11
12
16
15
3
2
1
VC1
CHARA POS
X1 (1)
VXO
29
30
IC1 (1)
CPU
DATA 2
STB 3
CLK 4
DA DATA 17
DA CLK 16
DA LD 15
LCD DATA0 21
PB L 14
CAM L 13
TCG INT 6
LTCR INT 7
45~60
ADDRESS BUS
IC6 (1)
ROM
22
CE
DATA BUS
IC5,7, 8,10
CS GEN
CS
37~44
DATA BUS
IC11,12 (1)
BUFFER
12~19
29,75
31,32
IC201 (2)
PARALLEL I/O
78 ZEBRA
79 ABB
80 AWB
1,2 SHUT
21 START
22 RET
23 EJECT
25 STOP
26 PLAY
27 FF
28 REW
VF DATA 51
VF CLK 50
VF WR 49
BACK TALLY 43
PLAY LED 40
FF LED 39
REW LED 38
54~61
TC DATA
66~71 78,79
62,65~71
TC ADDRESS
80~82 3~7
IC101,102 (4)
BUFFER
IC801 (3)
TIME CODE GATE ARRAY
LTC IN 29
LTC OUT 30
V SYNC 26
SYNC 25
SYS INT 45
TCG INT 40
LTCR INT 35
IC802,803 (3)
WAVEFORM SHAPER
IC802 (3)
V SYNC SEP
1
X802 (3)
VXO
76.7KHz(NTSC)
64KHz(PAL)
43
42
SYS A0~A15 38A~48A 39B~43B CAMERA SYSCON(P1-70 74A,B,75B) SET UP CARD
SYS D0~D7 30A~37A CAMERA SYSCON(P1-66 · 69A,B) SET UP CARD
SYS CE1 45B SET UP CARD
SYS CS 53A CAMERA SYSCON(P1-77A)
EXT LTC 76A MOTHER(P9621-1)-TC IN/OUT(12pin CONNECTOR #1)
LTC OUT 74A MOTHER(P9621-3)-TC IN/OUT(12pin CONNECTOR #3)
ASYNC 29A SYNC(P1-28A,B)
SYS INT 52A CAMERA SYSCON(P1-77B)
EVF CONNECTOR-MOTHER(P9610-12) 59B ZEBRA SW
OPERATE(P501-3)-MOTHER(P9611-3) 60B PLAY SW
OPERATE(P501-4)-MOTHER(P9611-4) 62B STOP SW
OPERATE(P501-2)-MOTHER(P9611-2) 63B FF SW
OPERATE(P501-1)-MOTHER(P9611-1) 64B REW SW
OPERATE(P501-5)-MOTHER(P9611-5) 65B EJECT SW
FRONT TOGGLE(P1-9)-MOTHER(P9601-21B) 64A START SW
LENS(12pin CONNECTOR #1)-MOTHER(P9608-7) 65A RET SW
FRONT TOGGLE(P1-5,6)-MOTHER(P9601-20A,B) 66A,67A SHUT SW1,2
FRONT TOGGLE(P1-3)-MOTHER(P9601-19B) 70A AWB SW
FRONT TOGGLE(P1-4)-MOTHER(P9601-19A) 72A ABB SW
CAM L 15B VIDEO VF(P1-15A)
PB L 24B VIDEO VF(P1-24A)
DA DATA 27B MOTHER(P9614-27B)-VIDEO MAIN(P1-34B)
DA CLK 28B MOTHER(P9614-28B)-VIDEO MAIN(P1-33B)
DA LD 29B MOTHER(P9614-26B)-VIDEO MAIN(P1-35B)
VF DATA 52B MOTHER(P9610-9)-EVF(20pin CONNECTOR #10)
VF CLK 53B MOTHER(P9610-10)-EVF(20pin CONNECTOR #8)
VF WR 55B MOTHER(P9610-11)-EVF(20pin CONNECTOR #9)
PLAY LED 66B MOTHER(P9611-7)-OPERATE(P501-7)
FF LED 67B MOTHER(P9611-8)-OPERATE(P501-8)
REW LED 69B MOTHER(P9611-9)-OPERATE(P501-9)
BACK TALLY 70B MOTHER(P9611-10)-OPERATE(P501-10)
LCD DATA 0 79B MOTHER(P9614-49A)-REAR JACK(P1001-6B)

## Servo P.C.Board

This circuit has two CPUs. **CPU1** controls cylinder and capstan. **CPU2** controls reel and mechanism.

**CAP AFG1** and **CAP AFG2** are capstan FGs. Those are supplied to **IC100** of **CPU1**. **CAP M1~M3** drive the capstan. **CAP VH1~VH3** are fed back to **CPU1**.

**CYL FG+** is cylinder FG. **CYL PG+** is cylinder PG. Those are supplied to **IC100** of **CPU1**. **CYL M1~M3** drive the cylinder. **CYL VH1~VH3** are fed back to **CPU1**.

**HID R** is R/P HSW. **HID P** is PB HSW. Played back CTL is input as **CTL HEAD P.** Recording CTL is also output as **CTL HEAD P. VR101** adjusts PG shifter which shifts HSW timing.

**SRL FG1** and **SRL FG2** are S-reel FGs. Those are supplied to **IC501** of **CPU2. SRL M1~M3** drive the S-reel. **SRL H1~H3** are fed back to **CPU2.**

**TRL FG1** and **TRL FG2** are T-reel FGs. Those are supplied to **IC501** of **CPU2. TRL M1~M3** drive the T-reel. **TRL H1~H3** are fed back to **CPU2.**

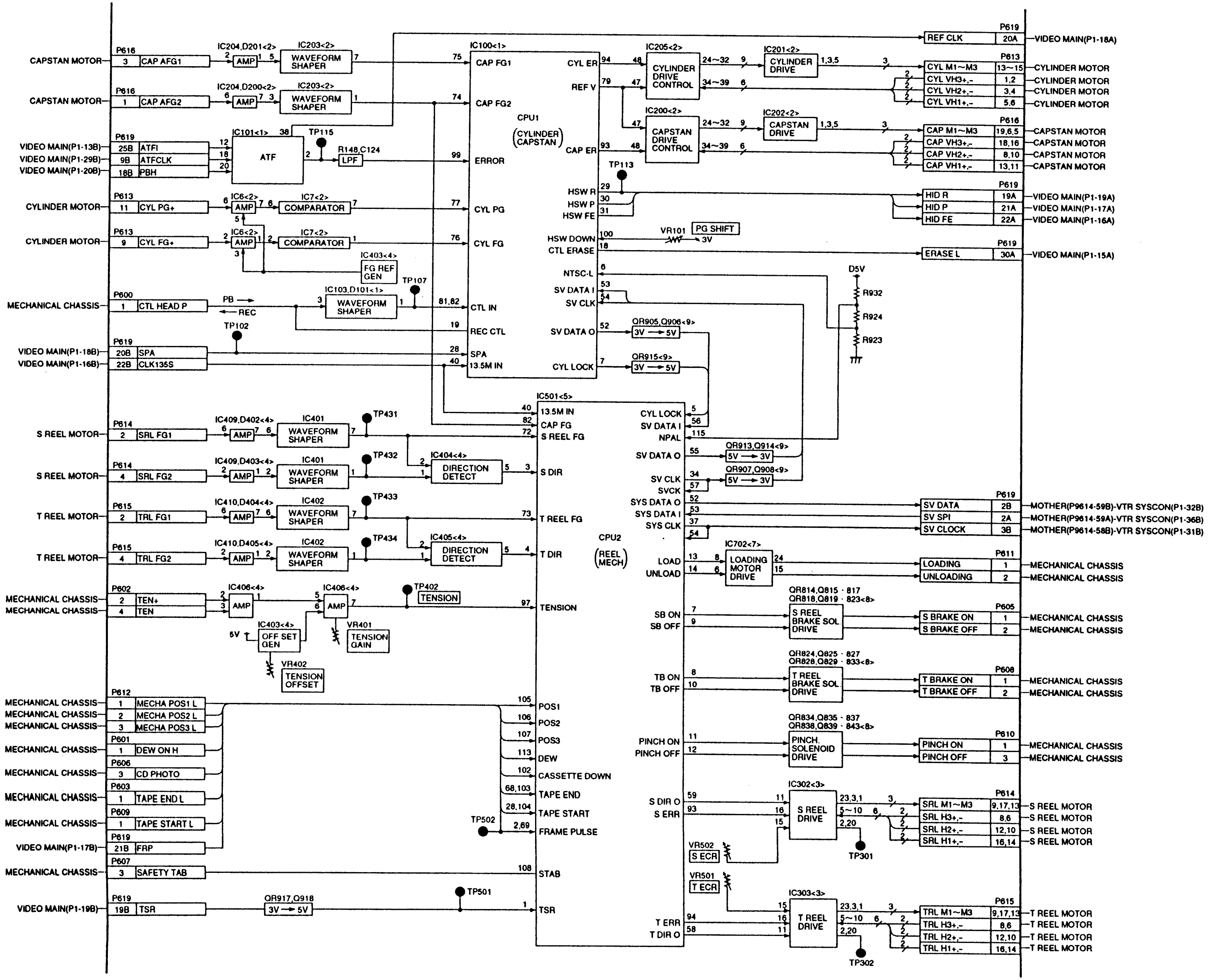
**IC504** generates reference voltages which are comparated with error voltages, **S ERR** and **T ERR.** Reference voltages depend on **VR501** and **VR502.**

**TEN+** and **TEN-** are input from tension sensor. **VR401** adjusts tension gain. **VR402** adjusts tension offset.

### Abbreviations

| | |
|---|---|
| ER, ERR | ERROR |
| DIR | DIRECTION |
| SV | SERVO |
| SB | S-REEL BRAKE |
| TB | T-REEL BRAKE |
| POS | POSITION |

## SERVO BLOCK DIAGRAM


CAPSTAN MOTOR
P616 3 CAP AFG1
CAPSTAN MOTOR
P616 1 CAP AFG2
VIDEO MAIN(P1-13B)
VIDEO MAIN(P1-29B)
VIDEO MAIN(P1-20B)
P619 25B ATFI
9B ATFCLK
18B PBH
CYLINDER MOTOR
P613 11 CYL PG+
CYLINDER MOTOR
P613 9 CYL FG+
MECHANICAL CHASSIS
P600 1 CTL HEAD P
VIDEO MAIN(P1-18B)
VIDEO MAIN(P1-16B)
P619 20B SPA
22B CLK135S
IC204,D201<2> AMP
IC203<2> WAVEFORM SHAPER
IC204,D200<2> AMP
IC203<2> WAVEFORM SHAPER
IC101<1> ATF
TP115
R148,C124 LPF
IC6<2> AMP
IC7<2> COMPARATOR
IC6<2> AMP
IC7<2> COMPARATOR
IC403<4> FG REF GEN
TP107
IC103,D101<1> WAVEFORM SHAPER
PB
REC
TP102
IC100<1>
CAP FG1
CAP FG2
CPU1
(CYLINDER CAPSTAN)
ERROR
CYL PG
CYL FG
CTL IN
REC CTL
SPA
13.5M IN
CYL ER
REF V
CAP ER
HSW R
HSW P
HSW FE
HSW DOWN
CTL ERASE
NTSC-L
SV DATA I
SV CLK
SV DATA O
CYL LOCK
TP113
IC205<2> CYLINDER DRIVE CONTROL
IC200<2> CAPSTAN DRIVE CONTROL
IC201<2> CYLINDER DRIVE
IC202<2> CAPSTAN DRIVE
VR101 PG SHIFT 3V
QR905,Q906<9> 3V → 5V
QR915<9> 3V → 5V
D5V
R932
R924
R923
P619 REF CLK 20A
VIDEO MAIN(P1-18A)
P613 CYL M1~M3 13~15 CYLINDER MOTOR
CYL VH3+,- 1,2 CYLINDER MOTOR
CYL VH2+,- 3,4 CYLINDER MOTOR
CYL VH1+,- 5,6 CYLINDER MOTOR
P616 CAP M1~M3 19,6,5 CAPSTAN MOTOR
CAP VH3+,- 18,16 CAPSTAN MOTOR
CAP VH2+,- 8,10 CAPSTAN MOTOR
CAP VH1+,- 13,11 CAPSTAN MOTOR
P619 HID R 19A VIDEO MAIN(P1-19A)
HID P 21A VIDEO MAIN(P1-17A)
HID FE 22A VIDEO MAIN(P1-16A)
P619 ERASE L 30A VIDEO MAIN(P1-15A)
S REEL MOTOR
P614 2 SRL FG1
S REEL MOTOR
P614 4 SRL FG2
T REEL MOTOR
P615 2 TRL FG1
T REEL MOTOR
P615 4 TRL FG2
IC409,D402<4> AMP
IC401 WAVEFORM SHAPER
TP431
IC409,D403<4> AMP
IC401 WAVEFORM SHAPER
TP432
IC404<4> DIRECTION DETECT
IC410,D404<4> AMP
IC402 WAVEFORM SHAPER
TP433
IC410,D405<4> AMP
IC402 WAVEFORM SHAPER
TP434
IC405<4> DIRECTION DETECT
MECHANICAL CHASSIS
MECHANICAL CHASSIS
P602 2 TEN+
4 TEN
IC406<4> AMP
IC406<4> AMP
TP402 TENSION
IC403<4> OFF SET GEN
5V
VR401 TENSION GAIN
VR402 TENSION OFFSET
MECHANICAL CHASSIS
MECHANICAL CHASSIS
MECHANICAL CHASSIS
P612 1 MECHA POS1 L
2 MECHA POS2 L
3 MECHA POS3 L
MECHANICAL CHASSIS
P601 1 DEW ON H
MECHANICAL CHASSIS
P606 3 CD PHOTO
MECHANICAL CHASSIS
P603 1 TAPE END L
MECHANICAL CHASSIS
P609 1 TAPE START L
VIDEO MAIN(P1-17B)
P619 21B FRP
MECHANICAL CHASSIS
P607 3 SAFETY TAB
VIDEO MAIN(P1-19B)
P619 19B TSR
QR917,Q918 3V → 5V
TP501
TP502
IC501<5>
13.5M IN
CAP FG
S REEL FG
S DIR
T REEL FG
T DIR
TENSION
POS1
POS2
POS3
DEW
CASSETTE DOWN
TAPE END
TAPE START
FRAME PULSE
STAB
TSR
CPU2
(REEL MECH)
CYL LOCK
SV DATA I
NPAL
SV DATA O
SV CLK
SVCK
SYS DATA O
SYS DATA I
SYS CLK
LOAD
UNLOAD
SB ON
SB OFF
TB ON
TB OFF
PINCH ON
PINCH OFF
S DIR O
S ERR
T ERR
T DIR O
QR913,Q914<9> 5V → 3V
QR907,Q908<9> 5V → 3V
P619 SV DATA 2B MOTHER(P9614-59B)-VTR SYSCON(P1-32B)
SV SPI 2A MOTHER(P9614-59A)-VTR SYSCON(P1-36B)
SV CLOCK 3B MOTHER(P9614-58B)-VTR SYSCON(P1-31B)
IC702<7> LOADING MOTOR DRIVE
P611 LOADING 1 MECHANICAL CHASSIS
UNLOADING 2 MECHANICAL CHASSIS
QR814,Q815 · 817
QR818,Q819 · 823<8>
S REEL BRAKE SOL DRIVE
P605 S BRAKE ON 1 MECHANICAL CHASSIS
S BRAKE OFF 2 MECHANICAL CHASSIS
QR824,Q825 · 827
QR828,Q829 · 833<8>
T REEL BRAKE SOL DRIVE
P608 T BRAKE ON 1 MECHANICAL CHASSIS
T BRAKE OFF 2 MECHANICAL CHASSIS
QR834,Q835 · 837
QR838,Q839 · 843<8>
PINCH SOLENOID DRIVE
P610 PINCH ON 1 MECHANICAL CHASSIS
PINCH OFF 3 MECHANICAL CHASSIS
IC302<3> S REEL DRIVE
VR502 S ECR
TP301
P614 SRL M1~M3 9,17,13 S REEL MOTOR
SRL H3+,- 8,6 S REEL MOTOR
SRL H2+,- 12,10 S REEL MOTOR
SRL H1+,- 16,14 S REEL MOTOR
VR501 T ECR
IC303<3> T REEL DRIVE
TP302
P615 TRL M1~M3 9,17,13 T REEL MOTOR
TRL H3+,- 8,6 T REEL MOTOR
TRL H2+,- 12,10 T REEL MOTOR
TRL H1+,- 16,14 T REEL MOTOR

## RF P.C.Board

(For recording) Input is **HSE**.(Top left) **EXT CW** is CW which is input from connector P2 when measuring C/N ratio. **IC8** selects **HSE** or **EXT CW**. **VR200** adjusts the duty of REC data at **IC208**. **Q208** and **Q209** are recording amplifiers for L ch. **REC CUR L** adjusts recording current(L ch). **REC FRE L** adjusts frequency characteristics(L ch). **Q202~Q205** switch mode REC or PB in L ch. **RP HEAD L P** and **N** are output to drum.

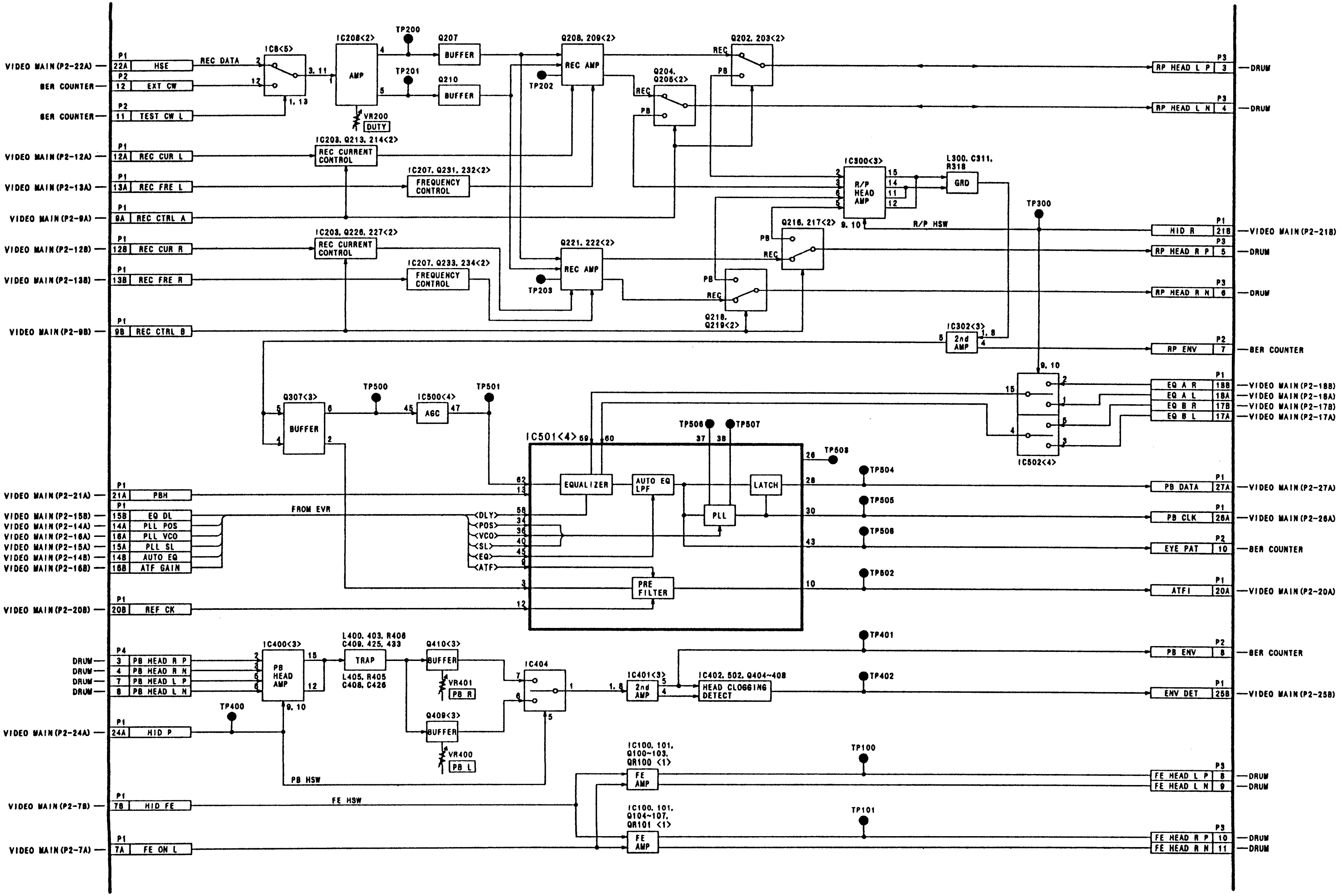
**Q221** and **Q222** are recording amplifiers for R ch. **REC CUR R** adjusts recording current(R ch). **REC FRE R** adjusts frequency characteristics(R ch). **Q216~Q219** switch mode REC or PB in R ch. **RP HEAD R P** and **N** are output to drum.

(For playback) **RP HEAD L P** and **N** are input from drum for L ch and supplied to **IC300** of R/P Head Amp via **Q202~Q205**. **RP HEAD R P** and **N** are input from drum for R ch and supplied to **IC300** of R/P Head Amp via **Q226~Q219**. L ch and R ch are multiplexed at **IC300** by **HID R** which is R/P HSW. Both channels data are supplied to **IC501** and equalized by EVR data which are **EQ DL, PLL POS, PLL SL, AUTO EQ, EQ $\alpha$ R, EQ $\alpha$ L, EQ $\beta$ R** and **EQ $\beta$ L**. Outputs from **IC501** are **PB DATA** and **PB CLK**.

**PB HEAD R P** and **N** and **PB HEAD L P** and **N** are supplied to **IC400** which multiplexes R ch and L ch by **HID P** of PB HSW. Monitoring those signals detects head clogging. Information of head clogging is supplied to VIDEO MAIN P.C.Board as **ENV DET**. **VR400** and **VR401** adjusts detection levels. **TRAP** traps the frequency of the current of Flying Erase Head.

**RP ENV, PB ENV** and **EYE PAT** are available at BNCs of B.E.R.Counter.

# RF BLOCK DIAGRAM



VIDEO MAIN (P2-22A)
P1 22A HSE
REC DATA
BER COUNTER
P2 12 EXT CW
BER COUNTER
P2 11 TEST CW L
IC8<5>
3, 11
1, 13
IC208<2>
AMP
VR200
DUTY
TP200
TP201
Q207 BUFFER
Q210 BUFFER
Q208, 209<2>
REC AMP
TP202
Q204, Q205<2>
REC
PB
Q202, 203<2>
REC
PB
P3 RP HEAD L P 3 —DRUM
P3 RP HEAD L N 4 —DRUM
VIDEO MAIN (P2-12A)
P1 12A REC CUR L
IC203, Q213, 214<2>
REC CURRENT CONTROL
VIDEO MAIN (P2-13A)
P1 13A REC FRE L
IC207, Q231, 232<2>
FREQUENCY CONTROL
VIDEO MAIN (P2-9A)
P1 9A REC CTRL A
IC300<3>
R/P HEAD AMP
9, 10
L300, C311, R318
GRD
R/P HSW
TP300
P1 HID R 21B —VIDEO MAIN (P2-21B)
VIDEO MAIN (P2-12B)
P1 12B REC CUR R
IC203, Q226, 227<2>
REC CURRENT CONTROL
VIDEO MAIN (P2-13B)
P1 13B REC FRE R
IC207, Q233, 234<2>
FREQUENCY CONTROL
Q221, 222<2>
REC AMP
TP203
Q216, 217<2>
PB
REC
Q218, Q219<2>
PB
REC
P3 RP HEAD R P 5 —DRUM
P3 RP HEAD R N 6 —DRUM
VIDEO MAIN (P2-9B)
P1 9B REC CTRL B
IC302<3>
2nd AMP
1, 8
P2 RP ENV 7 —BER COUNTER
Q307<3>
BUFFER
TP500
IC500<4>
AGC
TP501
IC501<4>
EQUALIZER
AUTO EQ LPF
PLL
LATCH
PRE FILTER
TP506
TP507
TP508
TP504
TP505
TP508
TP502
IC502<4>
9, 10
P1 EQ A R 18B —VIDEO MAIN (P2-18B)
EQ A L 18A —VIDEO MAIN (P2-18A)
EQ B R 17B —VIDEO MAIN (P2-17B)
EQ B L 17A —VIDEO MAIN (P2-17A)
VIDEO MAIN (P2-21A)
P1 21A PBH
P1 PB DATA 27A —VIDEO MAIN (P2-27A)
FROM EVR
VIDEO MAIN (P2-15B) 15B EQ DL
VIDEO MAIN (P2-14A) 14A PLL POS
VIDEO MAIN (P2-16A) 16A PLL VCO
VIDEO MAIN (P2-15A) 15A PLL SL
VIDEO MAIN (P2-14B) 14B AUTO EQ
VIDEO MAIN (P2-16B) 16B ATF GAIN
<DLY>
<POS>
<VCO>
<SL>
<EQ>
<ATF>
P1 PB CLK 26A —VIDEO MAIN (P2-26A)
P2 EYE PAT 10 —BER COUNTER
P1 ATFI 20A —VIDEO MAIN (P2-20A)
VIDEO MAIN (P2-20B)
P1 20B REF CK
TP401
P2 PB ENV 8 —BER COUNTER
DRUM— P4 3 PB HEAD R P
DRUM— 4 PB HEAD R N
DRUM— 7 PB HEAD L P
DRUM— 8 PB HEAD L N
IC400<3>
PB HEAD AMP
9, 10
L400, 403, R408 C409, 425, 433
TRAP
L405, R405 C408, C426
Q410<3> BUFFER
VR401 PB R
Q409<3> BUFFER
VR400 PB L
IC404
IC401<3>
2nd AMP
IC402, 502, Q404~408
HEAD CLOGGING DETECT
TP402
P1 ENV DET 25B —VIDEO MAIN (P2-25B)
TP400
VIDEO MAIN (P2-24A)
P1 24A HID P
PB HSW
IC100, 101, Q100~103, QR100 <1>
FE AMP
TP100
P3 FE HEAD L P 8 —DRUM
FE HEAD L N 9 —DRUM
VIDEO MAIN (P2-7B)
P1 7B HID FE
FE HSW
IC100, 101, Q104~107, QR101 <1>
FE AMP
TP101
P3 FE HEAD R P 10 —DRUM
FE HEAD R N 11 —DRUM
VIDEO MAIN (P2-7A)
P1 7A FE ON L

## Video Main P.C.Board

This circuit processes shuffling, compression, ECC and 24-25 conversion for recording. In addition to this it makes a reverse process for playback.

(For recording) The Y to be recorded is input to **IC1**, SHUFFLE, as **YSI0~7**. The C to be recorded is also input to **IC1**, SHUFFLE, as **CSI0~7**. **IC2** is a shuffling memory. **IC24** supplies the clocks for **IC1**. Both signals of VIDEO are shuffled and supplied to **IC3** to be compressed.

Audio serial data, **SDTO1,** is supplied from AUDIO LCD P.C Board to **IC11** via Rear Jack P.C.Board.

**IC13, VCO,** generates master clock for audio. **IC33** compensates the timing between video and audio. Audio signal is shuffled at **IC3**. Video data is compressed at **IC3**. Both are multiplexed and supplied to ECC of **IC4**. Video data is deshuffled at **IC4**. ECC codes are added to video and audio data, which are supplied to **IC5**. When playback, audio signal is separated **IC11** and output as **S DATA**.

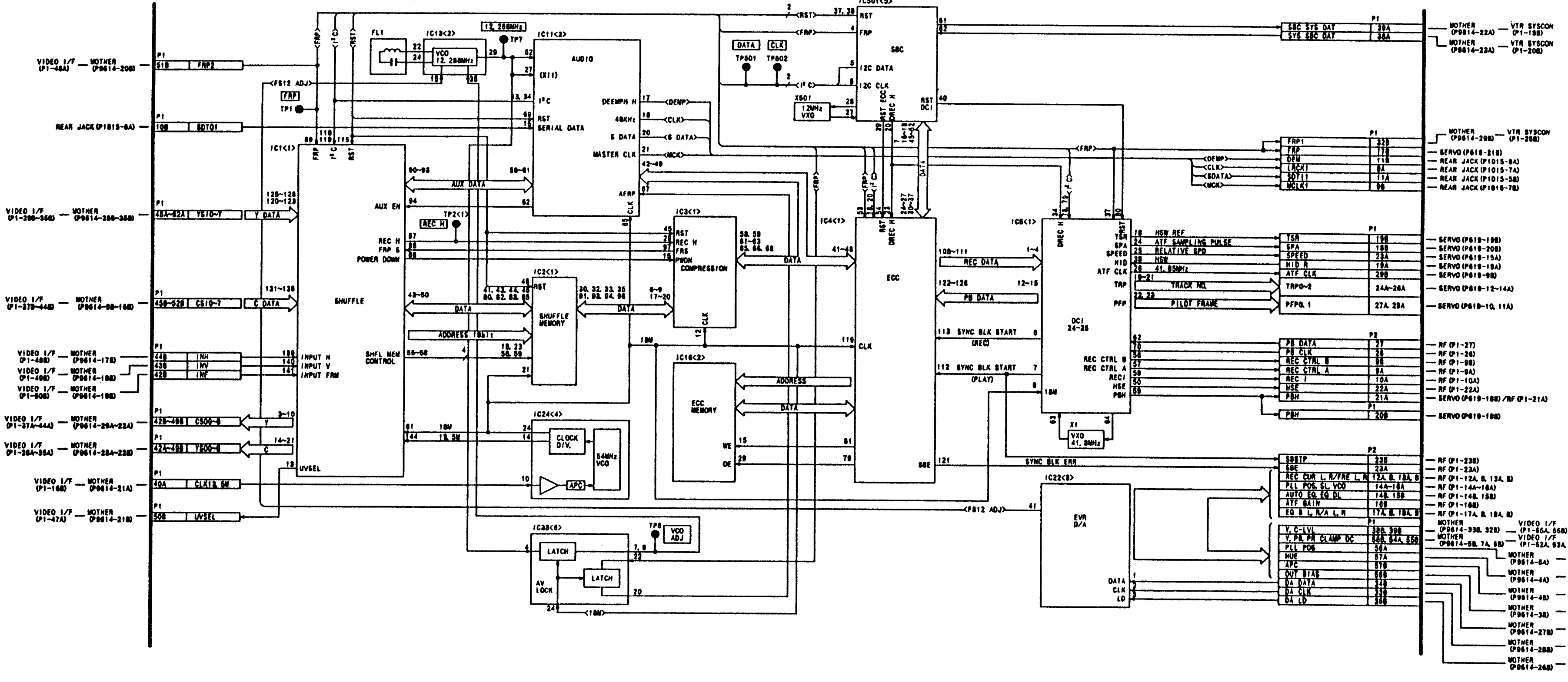
**IC5** is DCI which means the IC for digital signal processing. DCI makes two kinds of pilot signal for ATF by 24-25 conversion. One has the frequency of 465kHz, the other has the frequency of 697.5kHz.

**HSE** is the data to be recorded. **REC CTRL A** and **B** switch recording currents ON/OFF in RF circuit.

(For Playback) During playback the same circuit works the opposite process to recording. Input signal from RF Board is **PB DATA** which is supplied to **DCI**.

(Others) **IC22** is D/A converter for EVR data. **IC501** is **SBC** which receives sub code data from VTR Syscon P.C.Board and adds it to video data.

# VIDEO MAIN BLOCK DIAGRAM


VIDEO I/F (P1-46A) — MOTHER (P9614-20B)
P1
51B
FRP2
REAR JACK (P1615-6A)
10B
SDTO1
VIDEO I/F (P1-28B~35B) — MOTHER (P9614-28B~35B)
45A~52A
YSIO~7
Y DATA
125~128
120~123
VIDEO I/F (P1-37B~44B) — MOTHER (P9614-9B~16B)
45B~52B
CSIO~7
C DATA
131~138
VIDEO I/F (P1-48B) — MOTHER (P9614-17B)
VIDEO I/F (P1-49B) — MOTHER (P9614-18B)
VIDEO I/F (P1-50B) — MOTHER (P9614-19B)
44B
43B
42B
INH
INV
INF
139
140
141
INPUT H
INPUT V
INPUT FRM
VIDEO I/F (P1-37A~44A) — MOTHER (P9614-29A~22A)
42B~49B
CSOO~6
Y
3~10
VIDEO I/F (P1-28A~35A) — MOTHER (P9614-28A~22B)
42A~49B
YSOO~6
C
14~21
VIDEO I/F (P1-16B) — MOTHER (P9614-21A)
40A
CLK13.5M
VIDEO I/F (P1-47A) — MOTHER (P9614-21B)
50B
UVSEL
13
UVSEL
<FS12 ADJ>
FRP
TP1
<FRP>
<I²C>
<RST>
89
118
119
115
IC1<1>
FRP
I²C
RST
SHUFFLE
90~93
AUX DATA
58~61
AUX EN
94
62
TP2<1>
REC H
REC H
FRP 5
POWER DOWN
87
88
86
42~50
DATA
ADDRESS 18bit
SHFL MEM CONTROL
55~58
4
61
144
18M
13.5M
FL1
IC13<2>
VCO 12.288MHz
22
24
15
38
12.288MHz
TP7
29
IC11<2>
AUDIO
52
27
(X/1)
33, 34
I²C
69
16
RST
SERIAL DATA
DEEMPH H
48KHz
S DATA
MASTER CLK
17
18
20
21
<DEMP>
<CLK>
<S DATA>
<MCK>
42~49
AFRP
57
CLK
65
IC2<1>
48
RST
41, 43, 44, 46
80, 82, 83, 85
SHUFFLE MEMORY
18, 23
56, 59
21
30, 32, 33, 35
91, 93, 94, 96
DATA
6~9
17~20
IC3<1>
45
26
97
16
RST
REC H
FRS
PWDN
COMPRESSION
58, 59
61~63
65, 66, 68
DATA
CLK
12
18M
IC24<4>
24
14
10
CLOCK DIV.
54MHz VCO
APC
IC16<2>
ECC MEMORY
ADDRESS
DATA
WE
OE
15
29
81
79
IC33<6>
4
LATCH
LATCH
AV LOCK
7, 8
22
20
24
<18M>
TP8
VCO ADJ
IC501<5>
2
<RST>
37, 38
RST
<FRP>
4
FRP
SBC
DATA
CLK
TP501
TP502
2
<I²C>
5
6
I2C DATA
I2C CLK
X501
12MHz VXO
28
27
RST ECC
DREC H
RST DCI
40
61
62
39
20
7
16~18
45~52
DATA
IC4<1>
<FRP>
<I²C>
58
18, 20
54
23
24~27
30~37
RST
DREC H
41~48
ECC
119
CLK
108~111
REC DATA
122~126
PB DATA
113 SYNC BLK START
(REC)
112 SYNC BLK START
(PLAY)
SBE
121
SYNC BLK ERR
IC5<1>
<FRP>
<I²C>
34
78, 79
37
30
DREC H
RST
1~4
12~15
6
7
8
18M
DCI 24-25
TSR
SPA
SPEED
HID
ATF CLK
TRP
PFP
18 HSW REF
24 ATF SAMPLING PULSE
25 RELATIVE SPD
38 HSW
26 41.85MHz
19~21 TRACK NO.
22, 23 PILOT FRAME
REC CTRL B
REC CTRL A
RECI
HSE
PBH
62
70
56
57
58
50
59
63
64
X1
VXO 41.8MHz
IC22<8>
41
<FS12 ADJ>
EVR D/A
DATA
CLK
LD
1
P1
SBC SYS DAT — 29A
SYS SBC DAT — 28A
— MOTHER (P9614-22A) — VTR SYSCON (P1-18B)
— MOTHER (P9614-23A) — VTR SYSCON (P1-20B)
<DEMP>
<CLK>
<SDATA>
<MCK>
P1
FRP1 — 32B — MOTHER (P9614-29B) — VTR SYSCON (P1-26B)
FRP — 17B — SERVO (P619-21B)
DEM — 11B — REAR JACK (P1015-8A)
LRCK1 — 9A — REAR JACK (P1015-7A)
SDTI1 — 11A — REAR JACK (P1015-5B)
MCLK1 — 9B — REAR JACK (P1015-7B)
P1
TSR — 19B — SERVO (P619-19B)
SPA — 18B — SERVO (P619-20B)
SPEED — 23A — SERVO (P619-15A)
HID R — 19A — SERVO (P619-18A)
ATF CLK — 29B — SERVO (P619-9B)
TRPO~2 — 24A~26A — SERVO (P619-12~14A)
PFPO, 1 — 27A, 28A — SERVO (P619-10, 11A)
P2
PB DATA — 27 — RF (P1-27)
PB CLK — 26 — RF (P1-26)
REC CTRL B — 9B — RF (P1-9B)
REC CTRL A — 9A — RF (P1-9A)
REC I — 10A — RF (P1-10A)
HSE — 22A — RF (P1-22A)
PBH — 21A — SERVO (P619-18B) / RF (P1-21A)
P1
PBH — 20B — SERVO (P619-18B)
P2
SBSTP — 23B — RF (P1-23B)
SBE — 23A — RF (P1-23A)
REC CUR L, R/FRE L, R — 12A, B, 13A, B — RF (P1-12A, B, 13A, B)
PLL POS, SL, VCO — 14A~16A — RF (P1-14A~16A)
AUTO EQ, EQ DL — 14B, 15B — RF (P1-14B, 15B)
ATF GAIN — 16B — RF (P1-16B)
EQ B L, R/A L, R — 17A, B, 18A, B — RF (P1-17A, B, 18A, B)
P1
Y, C-LVL — 38B, 39B — MOTHER (P9614-33B, 32B) — VIDEO I/F (P1-65A, 66B)
Y, PB, PR CLAMP DC — 56B, 54A, 55B — MOTHER (P9614-5B, 7A, 6B) — VIDEO I/F (P1-62A, 63A, 64A)
PLL POS — 56A — MOTHER (P9614-5A) — VIDEO I/F (P1-64B)
HUE — 57A — MOTHER (P9614-4A) — VIDEO I/F (P1-62A)
APC — 57B — MOTHER (P9614-4B) — VIDEO I/F (P1-65B)
OUT BIAS — 55B — MOTHER (P9614-3B) — VIDEO I/F (P1-63B)
DA DATA — 34B — MOTHER (P9614-27B) — V. SYSCON (P1-27B)
DA CLK — 33B — MOTHER (P9614-28B) — V. SYSCON (P1-28B)
DA LD — 35B — MOTHER (P9614-26B) — V. SYSCON (P1-29B)

## Audio LCD P.C.Board

This circuit has three kinds of audio inputs.

**CH1 IN H** and **CH1 IN C** are supplied to **RY101** where attenuater ON/OFF is switched. **CH2 IN H** and **CH2 IN C** are supplied to **RY201** where attenuater ON/OFF is switched. **F MIC IN H** and **F MIC IN C** are inputs from front microphone. When phantom microphone is used, 48V is supplied based on **SW 12V**. All of those are supplied to **IC1** of MIC AMP where gains are controlled by **IC603**, Audio CPU.

CH1 is output from the **24th** pin of **IC1**. **SW701** switches balance or unbalance output for 26pin connector. **IC15** of HPF cuts the wind noise. **IC4** switches the HPF ON/OFF. **VR101** coarsely adjusts the level. **FRONT VR** which comes from the VR in front of camera recorder also adjusts CH1 recording level. **IC105** switches the mode. **VR102** adjusts recording level. **IC6** and **Q4** of TEST SG generate 1kHz of tone signal. The level of test tone is adjusted with **VR2**. **IC105** switches test tone or input audio. The signal to be recorded is A/D converted at **IC8** and supplied to Video Main P.C.Board via Rear Jack P.C.Board as **SDTO1**.

CH2 is output from the **13th** pin of **IC1**. **IC15** of HPF cuts the wind noise. **IC4** switches the HPF ON/OFF. **VR201** coarsely adjusts the level. **IC205** switches the mode. **VR202** adjusts recording level. **IC205** switches test tone or input audio.

The audio signal for output is input as **SDTI1** from Video Main P.C.Board via Rear Jack P.C.Board. It is D/A converted at **IC8** and supplied to MIX AMP and MONITOR SELECT. **IC6** and **IC10** of MIX AMP mixes CH1 and CH2. **IC11** selects CH1, CH2 or MIX as monitor outputs L ch and R ch. Selected signal or cue audio is selected at **IC12**. Monitor outputs are supplied as **MON VR IN L** and **R** to ALARM/MONITOR P.C.Board. They return as **MON VR OUT L** and **R** with alarm, **ALARM VR OUT**. **HP OUT L** and **R** are for headphone. **SP OUT** is for speaker.

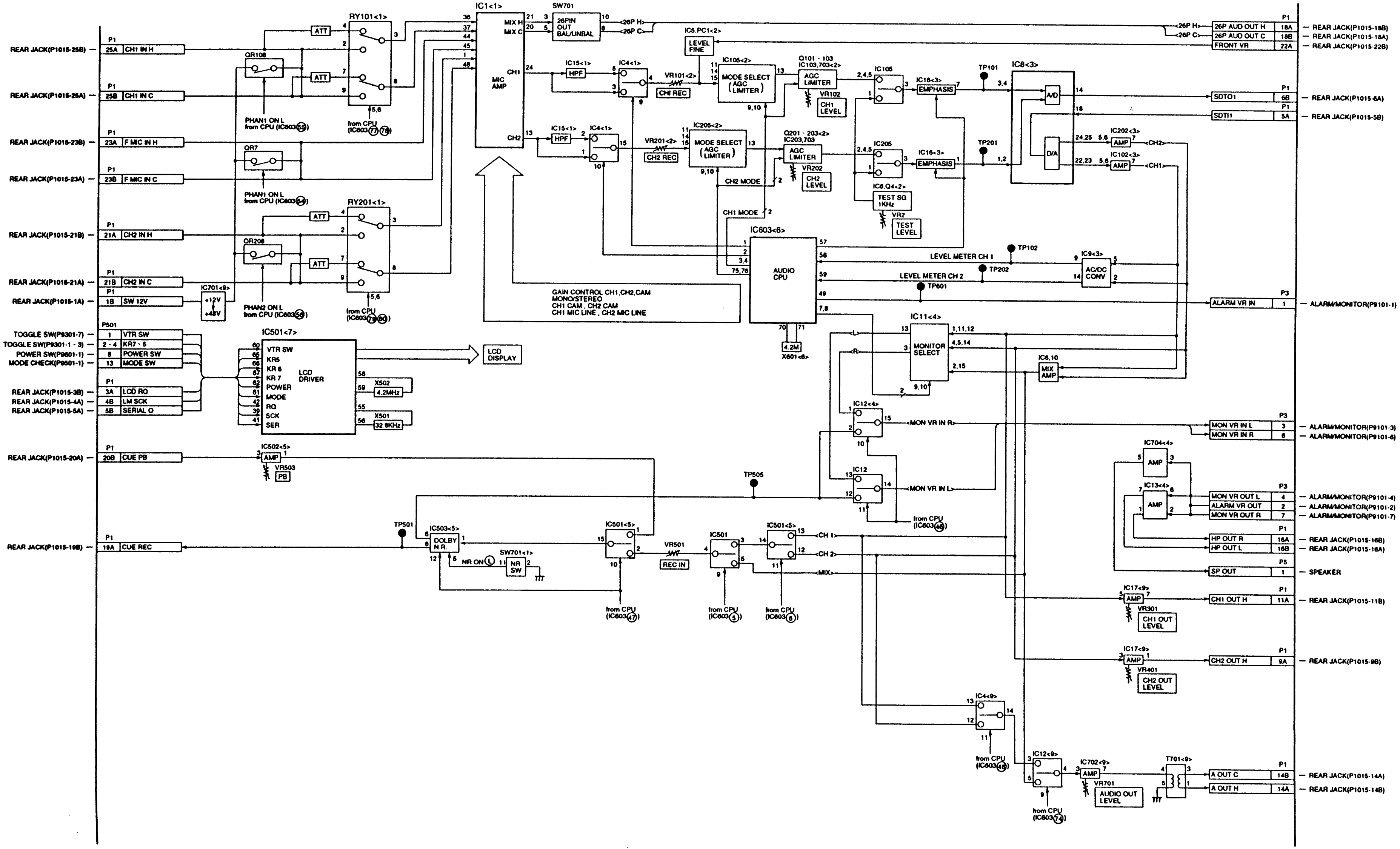
**IC17** adjusts CH1 OUT level and CH2 OUT level with **VR301** and **VR401**. Those outputs, **CH1 OUT H** and **CH2 OUT H**, are supplied to 12pin multi connector.

**IC501** selects recording signal for CUE audio. **VR501** adjusts recording level in CUE audio. **VR503** adjusts playback level in CUE audio.

**A OUT H** and **C** are supplied to Rear Jack P.C.Board for AUDIO OUT. **VR701** adjusts the level.

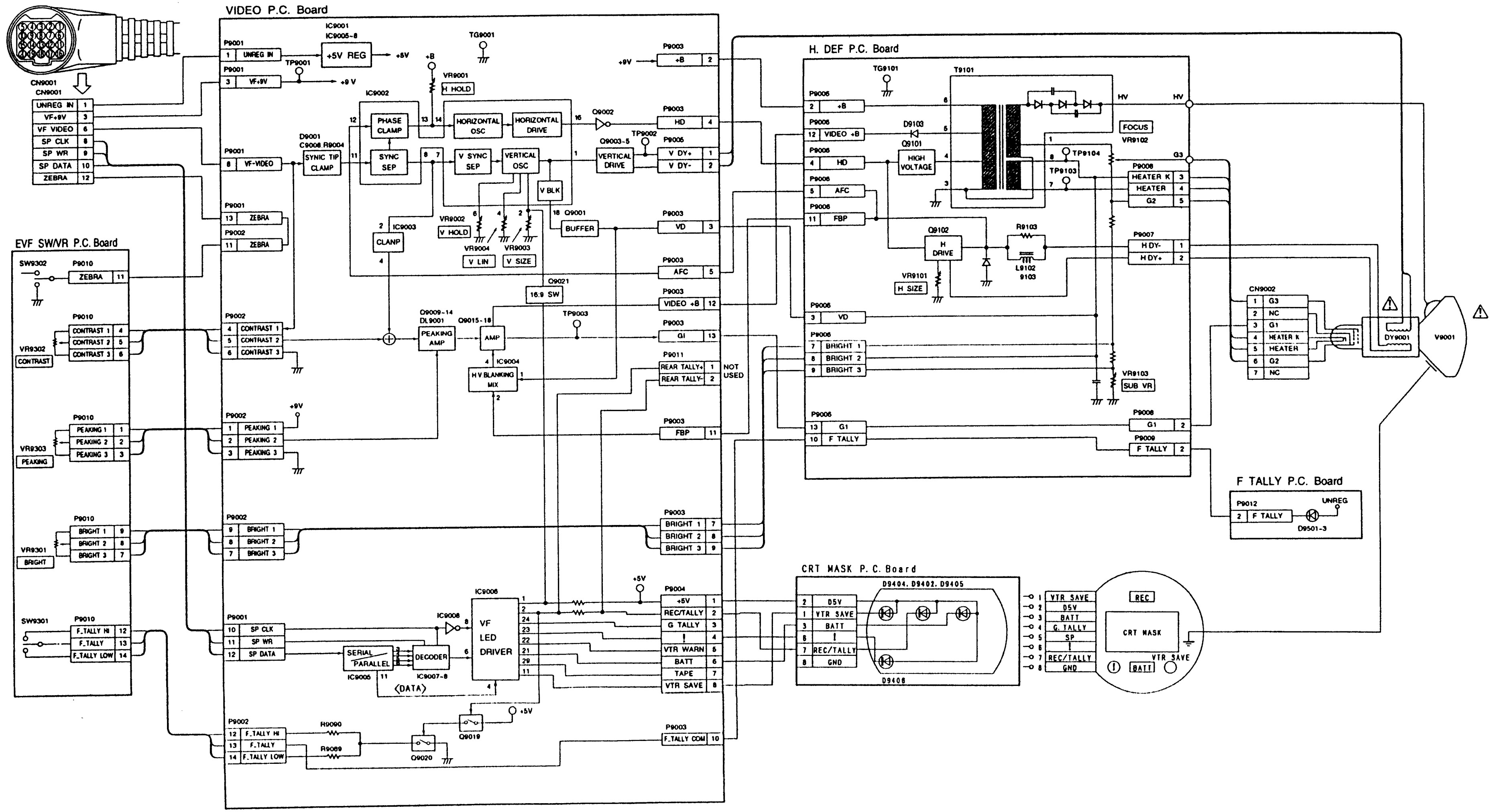
**IC501** drives LCD.

## AUDIO LCD BLOCK DIAGRAM



REAR JACK(P1015-25B)
REAR JACK(P1015-25A)
REAR JACK(P1015-23B)
REAR JACK(P1015-23A)
REAR JACK(P1015-21B)
REAR JACK(P1015-21A)
REAR JACK(P1015-1A)
TOGGLE SW(P9301-7)
TOGGLE SW(P9301-1 - 3)
POWER SW(P9601-1)
MODE CHECK(P9501-1)
REAR JACK(P1015-3B)
REAR JACK(P1015-4A)
REAR JACK(P1015-5A)
REAR JACK(P1015-20A)
REAR JACK(P1015-19B)
P1
25A CH1 IN H
25B CH1 IN C
23A F MIC IN H
23B F MIC IN C
21A CH2 IN H
21B CH2 IN C
1B SW 12V
P501
1 VTR SW
2 - 4 KR7 - 5
8 POWER SW
13 MODE SW
3A LCD RQ
4B LM SCK
5B SERIAL O
20B CUE PB
19A CUE REC
RY101<1>
ATT
QR108
QR7
PHAN1 ON L
from CPU (IC603(55))
from CPU (IC603(77)(78))
PHAN1 ON L
from CPU (IC603(54))
RY201<1>
QR208
PHAN2 ON L
from CPU (IC603(56))
from CPU (IC603(79)(80))
IC701<9>
+12V
+48V
IC501<7>
VTR SW
KR5
KR6
KR7
POWER
MODE
RQ
SCK
SER
LCD DRIVER
X502
4.2MHz
X501
32.8KHz
LCD DISPLAY
IC502<5>
AMP
VR503
PB
IC1<1>
MIX H
MIX C
MIC AMP
CH1
CH2
SW701
26PIN OUT BAL/UNBAL
<26P H>
<26P C>
IC5,PC1<2>
LEVEL FINE
IC15<1>
HPF
IC4<1>
VR101<2>
CH1 REC
IC105<2>
MODE SELECT (AGC LIMITER)
Q101 - 103 IC103,703<2>
AGC LIMITER
VR102
CH1 LEVEL
IC105
IC16<3>
EMPHASIS
TP101
IC8<3>
A/D
D/A
VR201<2>
CH2 REC
IC205<2>
MODE SELECT (AGC LIMITER)
Q201 - 203<2> IC203,703
AGC LIMITER
VR202
CH2 LEVEL
IC206
TP201
IC202<3>
AMP
<CH2>
IC102<3>
AMP
<CH1>
IC6,Q4<2>
TEST SG 1KHz
VR2
TEST LEVEL
CH2 MODE
CH1 MODE
IC603<6>
AUDIO CPU
4.2M
X601<6>
GAIN CONTROL CH1,CH2,CAM
MONO/STEREO
CH1 CAM , CH2 CAM
CH1 MIC LINE , CH2 MIC LINE
LEVEL METER CH 1
TP102
LEVEL METER CH 2
TP202
TP601
IC9<3>
AC/DC CONV
IC11<4>
MONITOR SELECT
<L>
<R>
IC6,10
MIX AMP
IC12<4>
<MON VR IN R>
IC12
<MON VR IN L>
from CPU (IC603(46))
TP505
TP501
IC503<5>
DOLBY N.R.
NR ON (L)
SW701<1>
NR SW
IC501<5>
VR501
REC IN
IC501
<CH 1>
<CH 2>
<MIX>
from CPU (IC603(47))
from CPU (IC603(5))
from CPU (IC603(6))
IC704<4>
AMP
IC13<4>
AMP
IC17<9>
VR301
CH1 OUT LEVEL
IC17<9>
VR401
CH2 OUT LEVEL
IC4<9>
from CPU (IC603(48))
IC12<9>
from CPU (IC603(74))
IC702<9>
AMP
VR701
AUDIO OUT LEVEL
T701<9>
26P AUD OUT H 18A
26P AUD OUT C 18B
FRONT VR 22A
SDTO1 6B
SDTI1 5A
P3
ALARM VR IN 1
MON VR IN L 3
MON VR IN R 6
MON VR OUT L 4
ALARM VR OUT 2
MON VR OUT R 7
HP OUT R 16A
HP OUT L 16B
P5
SP OUT 1
CH1 OUT H 11A
CH2 OUT H 9A
A OUT C 14B
A OUT H 14A
REAR JACK(P1015-18B)
REAR JACK(P1015-18A)
REAR JACK(P1015-22B)
REAR JACK(P1015-6A)
REAR JACK(P1015-5B)
ALARM/MONITOR(P9101-1)
ALARM/MONITOR(P9101-3)
ALARM/MONITOR(P9101-6)
ALARM/MONITOR(P9101-4)
ALARM/MONITOR(P9101-2)
ALARM/MONITOR(P9101-7)
REAR JACK(P1015-16B)
REAR JACK(P1015-16A)
SPEAKER
REAR JACK(P1015-11B)
REAR JACK(P1015-9B)
REAR JACK(P1015-14A)
REAR JACK(P1015-14B)

# EVF BLOCK DIAGRAM


VIDEO P.C. Board
H. DEF P.C. Board
EVF SW/VR P.C. Board
F TALLY P.C. Board
CRT MASK P. C. Board
CN9001
UNREG IN 1
VF+9V 3
VF VIDEO 6
SP CLK 8
SP WR 9
SP DATA 10
ZEBRA 12
P9001
UNREG IN
VF+9V
VF-VIDEO
IC9001
IC9005-8
+5V REG
+5V
+9V
TP9001
TG9001
+B
VR9001
H HOLD
IC9002
PHASE CLAMP
SYNC SEP
HORIZONTAL OSC
HORIZONTAL DRIVE
V SYNC SEP
VERTICAL OSC
V BLK
Q9002
Q9003-5
TP9002
VERTICAL DRIVE
D9001
C9008, R9004
SYNC TIP CLAMP
IC9003
CLAMP
VR9002
V HOLD
VR9004
V LIN
VR9003
V SIZE
Q9001
BUFFER
Q9021
16:9 SW
P9003
+B
HD
V DY+
V DY-
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AFC
VIDEO +B
G1
REAR TALLY+
REAR TALLY-
NOT USED
FBP
BRIGHT 1
BRIGHT 2
BRIGHT 3
F.TALLY COM
P9002
P9011
ZEBRA
CONTRAST 1
CONTRAST 2
CONTRAST 3
PEAKING 1
PEAKING 2
PEAKING 3
Q9009-14
DL9001
PEAKING AMP
Q9015-18
AMP
TP9003
IC9004
H V BLANKING MIX
SW9302
P9010
VR9302
CONTRAST
VR9303
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VR9301
BRIGHT
SW9301
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F.TALLY
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SP WR
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VF LED DRIVER
IC9008
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BATT
TAPE
VTR SAVE
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R9089
Q9019
Q9020
TG9101
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P9006
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VR9101
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VR9103
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CN9002
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V9001
P9012
UNREG
D9501-3
D9404, D9402, D9405
D9408
D5V
VTR SAVE
BATT
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REC/TALLY
GND
G. TALLY
SP
REC
CRT MASK
VTR SAVE
BATT

# SECTION 6

# EXPLODED VIEWS & PARTS LIST

Note:
1. *Be sure to make your orders of replacement parts according to this list.
2. Unless otherwise specified, all resistors are in OHMS, K=1,000 OHMS, all capacitors are in MICROFARADS (µF), P=µµF.
3. The P.C. Board units marked with "■" shown below the main assembled parts.
4. The parts marked with Ⓔ on the exploded view show the electric parts.
5. IMPORTANT SAFETY NOTICE
   Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components, use only the same type.
6. The marking (RTL) indicates the retention time is limited for this item.
   After the discontinuation of this assembly in production, it will no longer be available.

<<Abbreviations for part>>

| <NAME> | | | <DESCRIPTIONS> |
|---|---|---|---|
| C. CAPACITOR | | : | CERAMIC CAPACITOR |
| C. CAPACITOR | CH | : | CERAMIC CHIP CAPACITOR |
| E. CAPACITOR | | : | ELECTROLYTIC CAPACITOR |
| G. CAPACITOR | | : | GLASS CAPACITOR |
| M. CAPACITOR | | : | MICA CAPACITOR |
| P. CAPACITOR | | : | PLASTIC FILM CAPACITOR |
| S. CAPACITOR | | : | SEMI-CONDUCTOR CAPACITOR |
| T. CAPACITOR | | : | TANTALUM CAPACITOR |
| TRIMMER | | : | TRIMMER |
| C. RESISTOR | | : | CARBON RESISTOR |
| F. RESISTOR | | : | FUSE RESISTOR |
| M. RESISTOR | | : | METAL OXSIDE RESISTOR |
| M. RESISTOR | CH | : | METAL OXSIDE CHIP RESISTOR |
| S. RESISTOR | | : | SOLID RESISTOR |
| V. RESISTOR | | : | VARIABLE RESISTOR |
| W. RESISTOR | | : | WIRE WOUND RESISTOR |
| COMBI. TR-R | | : | TRANSISTOR-RESISTOR COMBINATION PARTS |
| COMBI. R-R | | : | RESISTOR-RESISTOR COMBINATION PARTS |
| COMBI. C-R | | : | CAPACITOR-RESISTOR COMBINATION PARTS |
| COMBI. C-R-R | | : | CAPACITOR-RESISTOR-COIL COMBINATION PARTS |
| P.C. BOARD | | : | PRINTED CIRCUIT BOARD |
| W/COMPONENT | | : | WITH COMPONENT |

# CONTENTS

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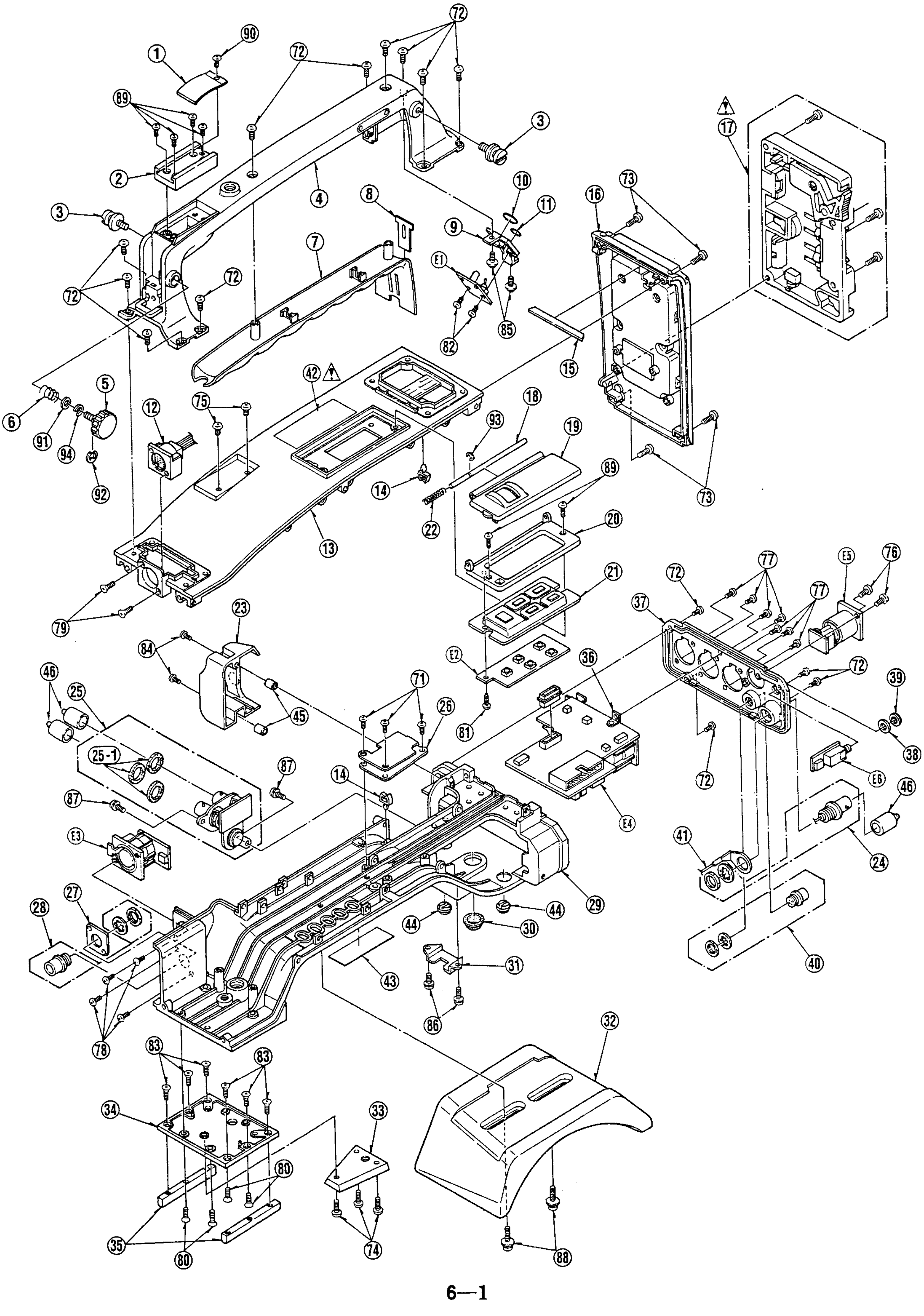
# FRAME ASSEMBLY (1)



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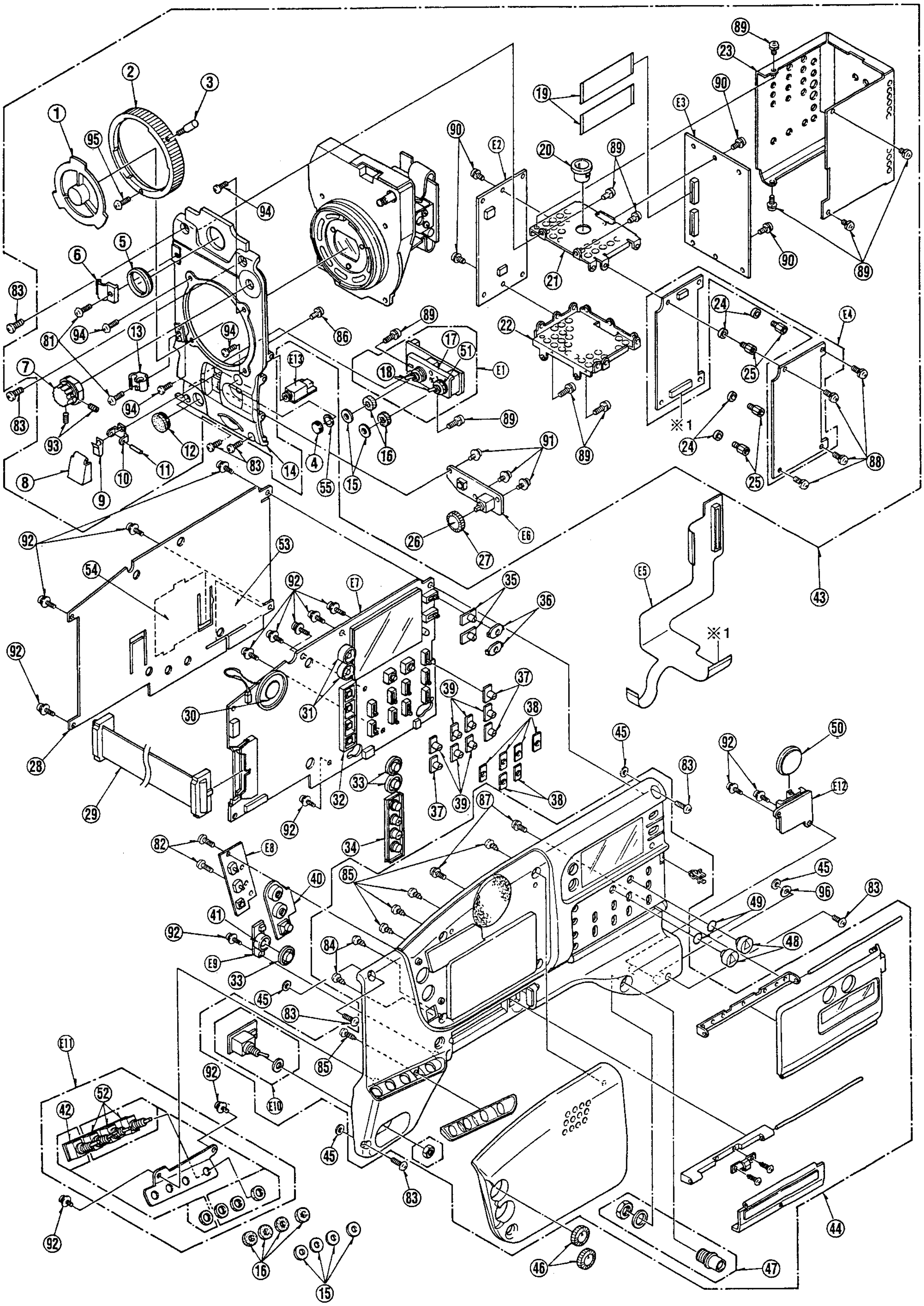
# MECHANICAL REPLACEMENT PARTS LIST
# FRAME ASSEMBLY (1)

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| 1 | 4G28145 | LEAF SPRING | 1 | |
| 2 | V5MA0046A4 | CAMERA SHOE | 1 | |
| 3 | VMS4284 | BELT HOOK PIN | 2 | |
| 4 | VKH0366 | HANDLE | 1 | |
| 5 | VGU7080 | SLIDE U LOCK KNOB | 1 | |
| 6 | VMB1615 | SPRING | 1 | |
| 7 | VKF2481 | HANDLE COVER | 1 | |
| 8 | VKF2516 | CARD COVER | 1 | |
| 9 | VGL0720 | TALLY COVER | 1 | |
| 10 | VMG0950 | P8 O_RING | 1 | |
| 11 | VMG0955 | P4 O_RING | 1 | |
| 12 | VEE9426 | EVF CONNECTOR U | 1 | |
| 13 | VGM1257 | UPPER CASE | 1 | |
| 14 | VJF0909 | CABLE CLAMPER | 2 | |
| 15 | VGF0515 | BATTERY CABLE HOLDER | 1 | |
| 16 | VYK7453 | BACK CASE | 1 | |
| 17 | VJF1125 | BATTERY HOLDER | 1 | |
| 18 | VMS5860 | DOOR SHAFT | 1 | |
| 19 | VKF2486 | VTR OPERATION DOOR | 1 | |
| 20 | VGK2214 | VTR OPERATION BASE | 1 | |
| 21 | VGU7082 | VTR OPERATION BUTTON | 1 | |
| 22 | VMB2917 | DOOR SPRING | 1 | |
| 23 | VKF2515 | CONNECTOR COVER | 1 | |
| 24 | VJS1440 | CONNECTOR (FEMALE) | 1 | |
| 25 | VEK8021 | SIDE L CONNECTOR U. | 1 | |
| 25-1 | VMG0943 | CONNECTOR INSULATION CUSHI | 3 | |
| 26 | VSC4400 | SHIELD CASE | 1 | |
| 27 | VMP4853 | LENS CONNECTOR PLATE | 1 | |
| 28 | VEE9429 | LENS CONNECTOR | 1 | |
| 29 | VGM1259 | BOTTOM CASE | 1 | |
| 30 | VMG0643 | BRAKER CAP | 1 | |
| 31 | VMP4896 | BACK LOCK ANGLE | 1 | |
| 32 | VMT0768 | SHOLDER PAD | 1 | |
| 33 | VGM1278 | FRONT V EDGE | 1 | |
| 34 | VGM1277 | FRONT FOOT BASE | 1 | |
| 35 | VKA0299 | FRONT FOOK | 2 | |
| 36 | VMP4846 | JACK P. C. BOARD ANGLE | 1 | |
| 37 | VGM1263 | JACK PANEL | 1 | |
| 38 | VMX0531 | WASHER | 1 | |
| 39 | VHN0194 | NUT | 1 | |
| 40 | VEE9413 | CONNECTOR | 1 | |
| 41 | VMP5193 | BNC LUG | 1 | |
| 43 | VGQ4060 | NET | 1 | |
| 44 | VMG0954 | REAR FOOT | 2 | |
| 45 | VMX2606 | WASHER | 2 | |
| 46 | VGF0362 | BNC CAP | 3 | |
| | | | | |
| | | | | |
| | | | | |
| 71 | XSB26+6 | SCREW | 3 | |
| 72 | XSB3+8FZ | SCREW | 14 | |
| 73 | XSB3+10FZ | SCREW | 4 | |
| 74 | XSB4+6FC | SCREW | 3 | |
| 75 | XSB4+6FZ | SCREW | 2 | |
| 76 | XSN26+6FC | SCREW | 2 | |
| 77 | XSN26+6FZ | SCREW | 7 | |
| 78 | XSN26+8FZ | SCREW | 4 | |
| 79 | XSS2+4FZ | SCREW | 2 | |
| 80 | XSS3+8FZS | SCREW | 4 | |
| 81 | XTN2+4G | SCREW | 1 | |
| 82 | XTN2+6G | SCREW | 2 | |
| 83 | XTS26+6J | SCREW | 6 | |
| 84 | XSN3+8FZ | SCREW | 2 | |
| 85 | XYN2+F6 | SCREW | 2 | |
| 86 | XYN26+C8FZ | SCREW | 2 | |
| 87 | XYN3+C6 | SCREW | 2 | |
| 88 | XYN3+F8 | SCREW | 2 | |
| 89 | XSN2+6FZ | SCREW | 6 | |
| 90 | XSN26+4FC | SCREW | 1 | |
| 91 | XWE4FZ | WASHER | 1 | |
| 92 | XUC3FP | E RING | 1 | |
| 93 | XUC12VM | E RING | 1 | |
| 94 | XWA4BFZ | WASHER | 1 | |
| | | | | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| E1 | | BACK TALLY LED P. C. BOARD | 1 | |
| E2 | | VTR OPERATION P. C. BOARD | 1 | |
| E3 | | FRONT MIC P. C. BOARD | 1 | |
| E4 | | REAR JACK P. C. BOARD | 1 | |
| E5 | | DC INPUT P. C. BOARD | 1 | |
| E6 | | HEADPHONE P. C. BOARD | 1 | |

# FRAME ASSEMBLY (2)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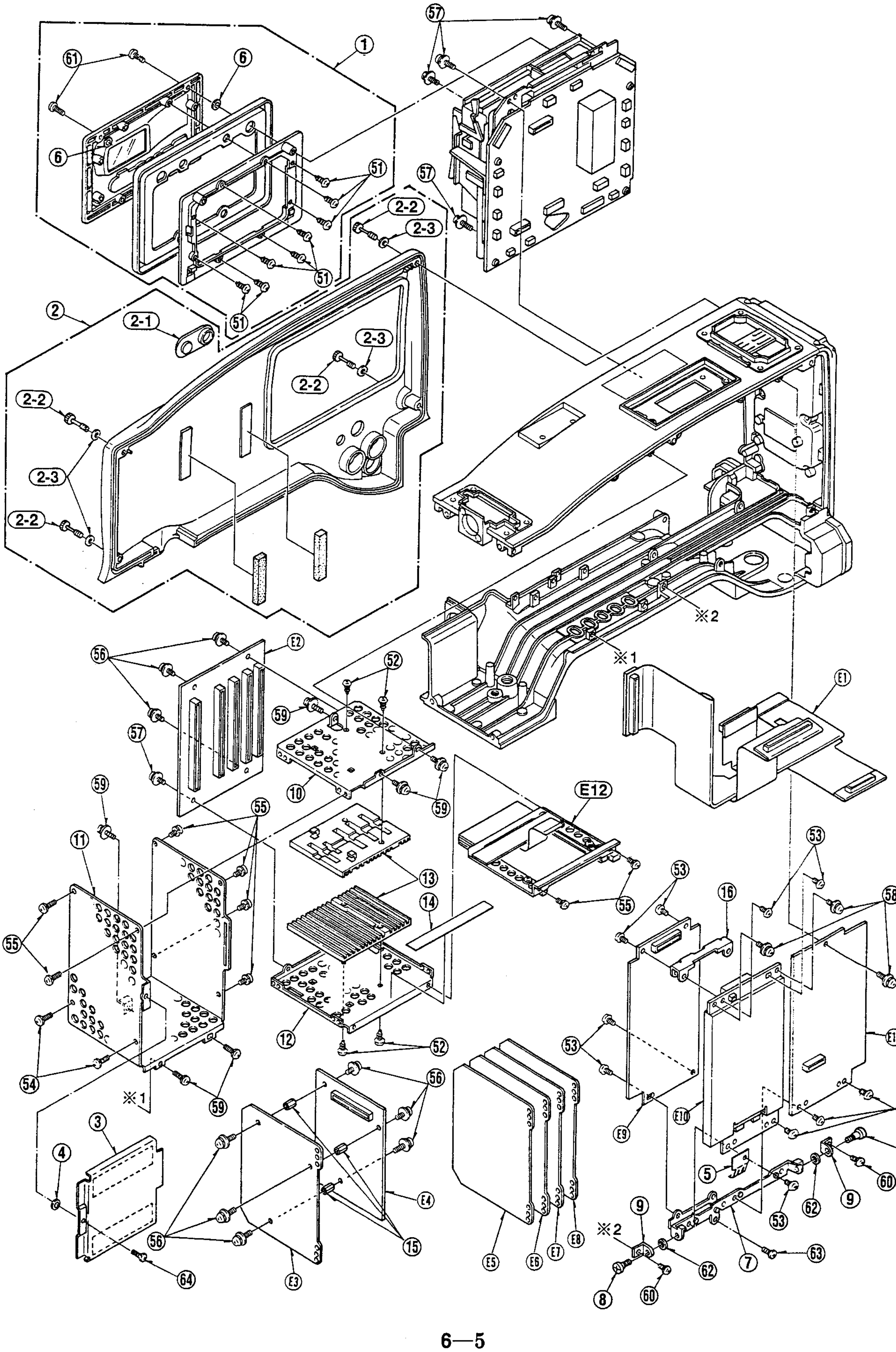
# FRAME ASSEMBLY (2)

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| 1 | VKF2125 | MOUNT CAP | 1 | |
| 2 | VDW0249 | LENS MOUNT | 1 | |
| 3 | VHD0809 | LENS MOUNT RING KNOB | 1 | |
| 4 | VHN0194 | NUT | 1 | |
| 5 | VMG0948 | EVF RUBBER SHIELD | 1 | |
| 6 | VJF0804 | LENS CABLE CLAMPER | 1 | |
| 7 | VGU7079 | FILTER KNOB | 1 | |
| 8 | VKF2485 | FRONT DOOR | 1 | |
| 9 | VMC1210 | FRONT DOOR SPRING | 1 | |
| 10 | VMP4850 | FRONT DOOR ANGLE | 1 | |
| 11 | VMS4088 | FRONT DOOR ANGLE PIN | 1 | |
| 12 | VGU6714 | RUBBER BUSH KNOB | 1 | |
| 13 | VJF1256 | CABLE CLAMPER | 1 | |
| 14 | VGM1256 | FRONT CASE | 1 | |
| 15 | VMG0646 | SW INSULATION SHEET | 6 | |
| 16 | VMT0738 | SW INSULATION CUSHION | 6 | |
| 17 | VMP4839 | SW HOLDER ANGLE | 1 | |
| 18 | VST0195 | SWITCH | 2 | |
| 19 | VWJ18SW065L1 | FLAT CABLE | 2 | |
| 20 | VJF1091 | ONE TUCH BUSHING | 1 | |
| 21 | VMP4848 | OP LENS UPPER BRACKET | 1 | |
| 22 | VMP4849 | OP LENS LOWER BRACKET | 1 | |
| 23 | VSC4370 | SHIELD CASE | 1 | |
| 24 | VMX2527 | P. C. BOARD SPACER | 4 | |
| 25 | VMX2534 | P. C. BOARD SPACER PIN | 4 | |
| 26 | VGH3360 | VR KNOB CAP A | 1 | |
| 27 | VGU5694 | VR KNOB | 1 | |
| 28 | VMZ2498 | LCD BARRIER | 1 | |
| 29 | VEE9427 | FLAT CABLE | 1 | |
| 30 | EAS2P104N | SPEAKER | 1 | |
| 31 | VGQ3417 | PUSH BUTTON HOLDER A | 2 | |
| 32 | VGQ3415 | OPERATION BUTTON HOLDER | 1 | |
| 33 | VGU7081 | OPERATION BUTTON | 3 | |
| 34 | VGU7153 | OPERATION BUTTON B | 1 | |
| 35 | VGU7152 | SLIDE SW COVER B | 2 | |
| 36 | VMG0947 | SLIDE KNOB RUBBER | 2 | |
| 37 | VGU7262 | SLIDE SW COVER C | 3 | |
| 38 | VGH3746 | SLIDE SW SHEET | 6 | |
| 39 | VGU7151 | SLIDE SW COVER A | 6 | |
| 40 | VMG0945 | VR SHIELD RUBBER | 1 | |
| 41 | VGQ3417 | PUSH BUTTON HOLDER A | 1 | |
| 42 | VST0299 | SWITCH | 1 | |
| 43 | VEQ1939 | CAMERA U | 1 | |
| 44 | VYP6350 | SIDE CASE R1 U. | 1 | AJ-D700E |
| 44 | VYP5937 | SIDE CASE R1 U. | 1 | AJ-D700EN |
| 45 | VMX1558 | WASHER | 4 | |
| 46 | VGU7077 | VR KONB A | 2 | |
| 47 | VEE9439 | ECU CONNECTOR | 1 | |
| 48 | VGU7078 | VR KNOB B | 2 | |
| 49 | VMG0962 | O_RING | 2 | |
| 50 | CR2032 | BATTERY | 1 | |
| 51 | VST0194 | SWITCH | 1 | |
| 52 | VST0300 | SWITCH | 3 | |
| 53 | VSC4478 | 50P CABLE SHIELD PLATE | 1 | |
| 54 | VMZ2599 | RF BARRIER | 1 | |
| 55 | VMX0531 | WASHER | 1 | |
| 81 | XSB2+4FZ | SCREW | 2 | |
| 82 | XSB3+6FR | SCREW | 2 | |
| 83 | XSB3+10VZ | SCREW | 4 | |
| 84 | XTV26+6G | SCREW | 2 | |
| 85 | XTV3+8G | SCREW | 5 | |
| 86 | XYN2+C4 | SCREW | 1 | |
| 87 | XYN26+K4 | SCREW | 2 | |
| 88 | XYN3+C4 | SCREW | 4 | |
| 89 | XYN3+C6 | SCREW | 10 | |
| 90 | XYN3+E6FR | SCREW | 4 | |
| 91 | XYN3+K6 | SCREW | 3 | |
| 92 | XYN3+K6RS | SCREW | 15 | |
| 93 | XXEV26W3FP | SCREW | 2 | |
| 94 | XSB3+6FZS | SCREW | 4 | |
| 95 | XQN2+A4FZ | SCREW | 1 | |
| 96 | XWG4 | WASHER | 1 | |
| E1 | | FRONT TOGGLE SW P. C. BOARD | 1 | |
| E2 | | CDS P. C. BOARD | 1 | |
| E3 | | PULSE P. C. BOARD | 1 | |
| E4 | | PRE PROCESS P. C. BOARD | 1 | |
| E5 | | CAMERA FLEX. CABLE P. C. B. | 1 | |
| E6 | | FRONT P. C. BOARD | 1 | |
| E7 | | AUDIO LCD P. C. BOARD | 1 | |
| E8 | | ALARM/MONITOR P. C. BOARD | 1 | |
| E9 | | MODE CHECK P. C. BOARD | 1 | |
| E10 | | POWER SW P. C. BOARD | 1 | |
| E11 | | TOGGLE SW P. C. BOARD | 1 | |
| E12 | | BACKUP BATTERY P. C. BOARD | 1 | |

# FRAME ASSEMBLY (3)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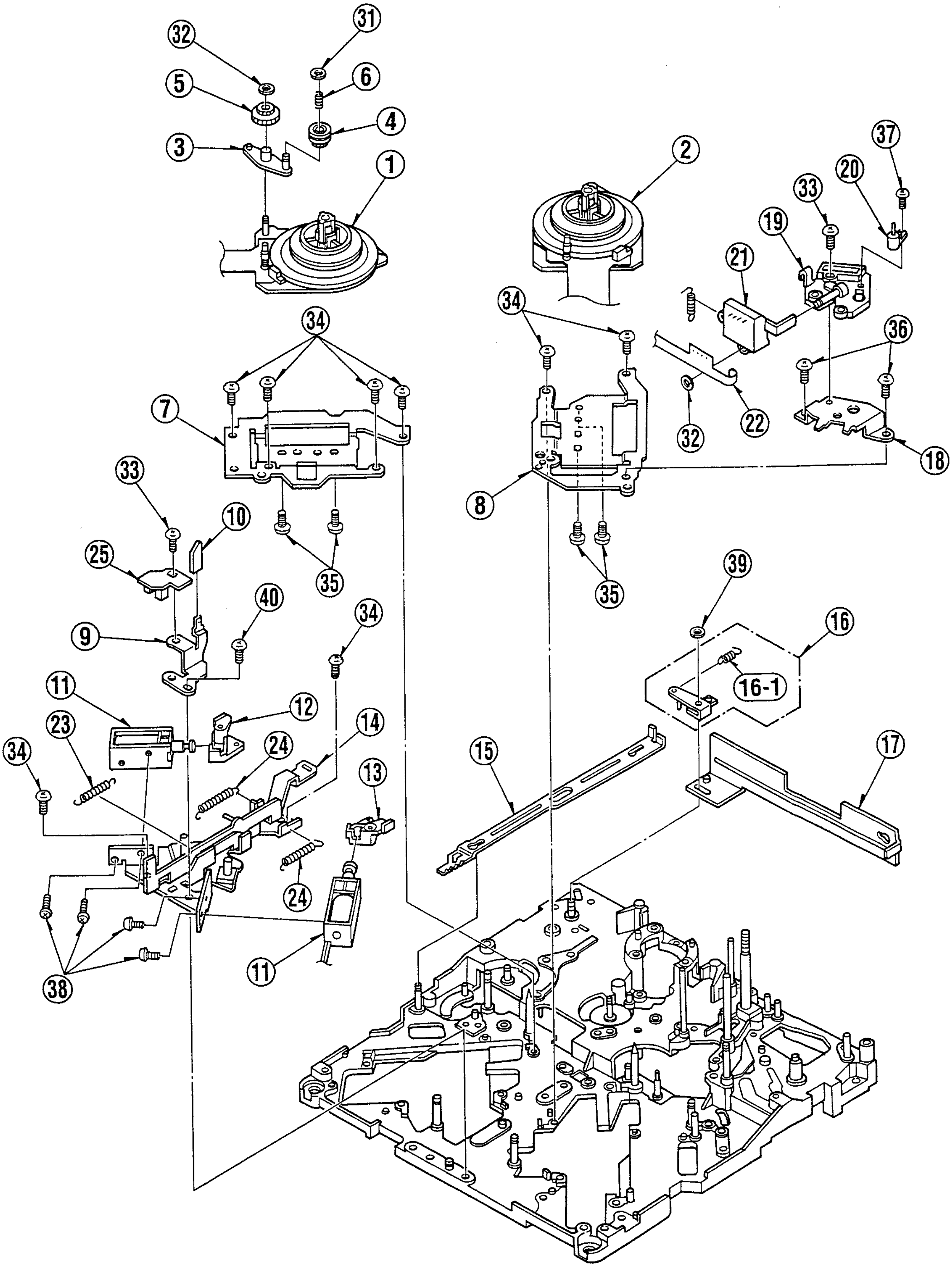
# FRAME ASSEMBLY (3)

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| 1 | VYF2185 | CASSETTE COVER U. | 1 | |
| 2 | VYP6372 | SIDE CASE L U. | 1 | |
| 2-1 | VMG0953 | E-E CAP | 1 | |
| 2-2 | VHD0820 | SCREW | 4 | |
| 2-3 | VMX1090 | WASHER | 4 | |
| 3 | VXA5434 | P. C. BOARD HOLDER U. | 1 | |
| 4 | VMX1558 | WASHER | 1 | |
| 5 | VMP5189 | EARTH PLATE | 1 | |
| 6 | VMX2605 | WASHER | 2 | |
| 7 | VMP4845 | P. C. BOARD ANGLE | 1 | |
| 8 | VHD0325 | SCREW | 2 | |
| 9 | VMP4841 | ROTALLY ANGLE | 2 | |
| 10 | VMP4843 | UPPER P. C. BOARD BOX | 1 | |
| 11 | VMP4842 | P. C. BOARD BOX | 1 | |
| 12 | VMP4844 | LOWER P. C. BOARD BOX | 1 | |
| 13 | VGQ3992 | GUIDE RAIL | 2 | |
| 14 | VQL8123 | BOARD NAME LABEL | 1 | |
| 15 | VMS4913 | P. C. BOARD SPACER | 3 | |
| 16 | VMP4858 | VIDEO P. C. BOARD ANGLE | 1 | |
| 51 | XTB26+6GFZ | SCREW | 8 | |
| 52 | XTV26+6G | SCREW | 4 | |
| 53 | XTV3+6F | SCREW | 10 | |
| 54 | XSB3+4 | SCREW | 2 | |
| 55 | XYN3+C5 | SCREW | 8 | |
| 56 | XYN3+K5 | SCREW | 9 | |
| 57 | XYN3+K8 | SCREW | 5 | |
| 58 | XYN3+K6RS | SCREW | 3 | |
| 59 | XYN3+C8 | SCREW | 6 | |
| 60 | XYN3+C6 | SCREW | 2 | |
| 61 | XSB26+12FZ | SCREW | 2 | |
| 62 | XWGV4Y9G | WASHER | 2 | |
| 63 | XYN3+C8FR | SCREW | 1 | |
| 64 | XYN3+F8FXRS | SCREW | 1 | |
| E1 | | VTR FLEX. CABLE P. C. BOARD | 1 | |
| E2 | | MOTHER P. C. BOARD | 1 | |
| E3 | | CAMERA SYSCON P. C. BOARD | 1 | |
| E4 | | DSP P. C. BOARD | 1 | |
| E5 | | ENCODER P. C. BOARD | 1 | |
| E6 | | SYNC P. C. BOARD | 1 | |
| E7 | | VTR SYSCON P. C. BOARD | 1 | |
| E8 | | VIDEO I/F P. C. BOARD | 1 | |
| E9 | | VIDEO MAIN P. C. BOARD | 1 | |
| E10 | | RF P. C. BOARD | 1 | |
| E11 | | POWER SUPPLY P. C. BOARD | 1 | |
| E12 | | MEMORY CARD P. C. BOARD | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |

# MECHANICAL CHASSIS ASSEMBLY (1)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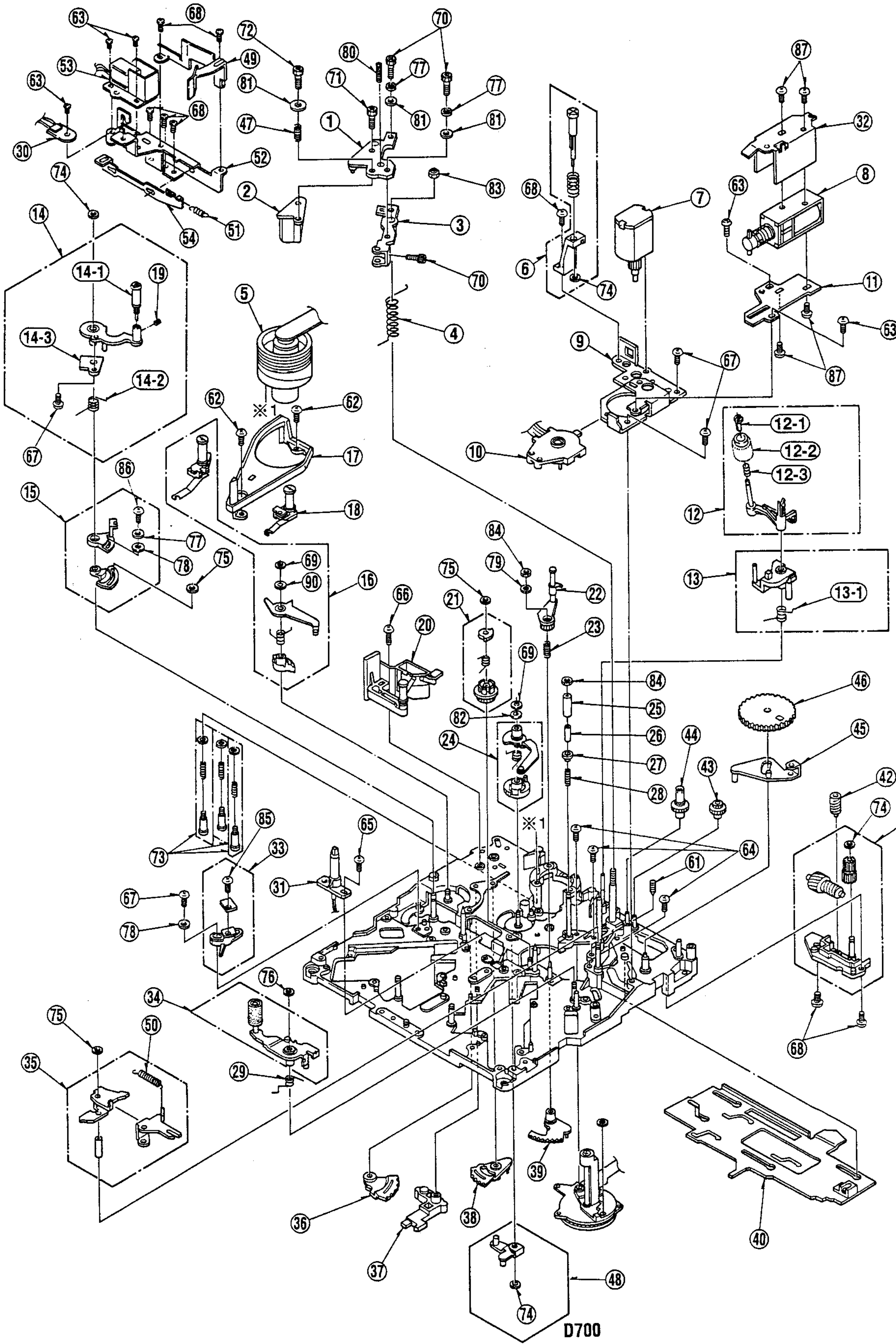
# MECHANICAL CHASSIS ASSEMBLY (1)

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| 1 | VEM0580 | S REEL MOTOR U. | 1 | |
| 2 | VEM0582 | T REEL MOTOR U. | 1 | |
| 3 | VXL2614 | IDLER GEAR | 1 | |
| 4 | VXP1700 | IDLER GEAR B U | 1 | |
| 5 | VDG1189 | IDLER GEAR A | 1 | |
| 6 | VMB3011 | IDLER SPRING | 1 | |
| 7 | VMA9399 | S SIDE M STOPPER | 1 | |
| 8 | VMA9372 | T SIDE M STOPPER | 1 | |
| 9 | VMA9400 | M LOCK/RELEASE | 1 | |
| 10 | VMD2588 | BRAKE RELEASE | 1 | |
| 11 | VSJ0216 | BRAKE SOLENOID | 2 | |
| 12 | VXL2705 | M-CASSETTE BRAKE (S) U. | 1 | |
| 13 | VXL2706 | M-CASSETTE BRAKE (T) U. | 1 | |
| 14 | VXA5582 | M CASSETTE BRAKE BASE 1U | 1 | |
| 15 | VML3097 | CONNECTION ARM A | 1 | |
| 16 | VXL2615 | CONNECTION ARM B U. | 1 | |
| 16-1 | VMB2973 | ARM RELEASE SPRING | 1 | |
| 17 | VXL2653 | CONNECTION ARM C U. | 1 | |
| 18 | VMD2536 | M SWITCH BASE | 1 | |
| 19 | VXA5633 | M SWITCH BASE (1)U | 1 | |
| 20 | VSS0510 | INHIBIT SWITCH | 1 | |
| 21 | VSS0509 | MIC CONNECTOR | 1 | |
| 22 | VWJ1074 | MIC FPC | 1 | |
| 23 | VMB2779 | LOCK SPRING | 1 | |
| 24 | VMB3080 | M-CASSETTE BRAKE SPRING | 2 | |
| 25 | VEK7694 | CASSETTE DOWN PHOTO U. | 1 | |
| | | | | |
| | | | | |
| 31 | VMX2391 | CUT WASHER | 1 | |
| 32 | VMX1061 | CUT WASHER | 2 | |
| 33 | XQN2+A3 | SCREW | 2 | |
| 34 | XQN2+CF3 | SCREW | 8 | |
| 35 | XQN2+AG4 | SCREW | 4 | |
| 36 | XQN2+CF4 | SCREW | 2 | |
| 37 | XQN2+AG6 | SCREW | 1 | |
| 38 | XQN2+A14 | SCREW | 4 | |
| 39 | VMX0967 | WASHER | 1 | |
| 40 | XQN2+CF4 | SCREW | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|

# MECHANICAL CHASSIS ASSEMBLY (2)



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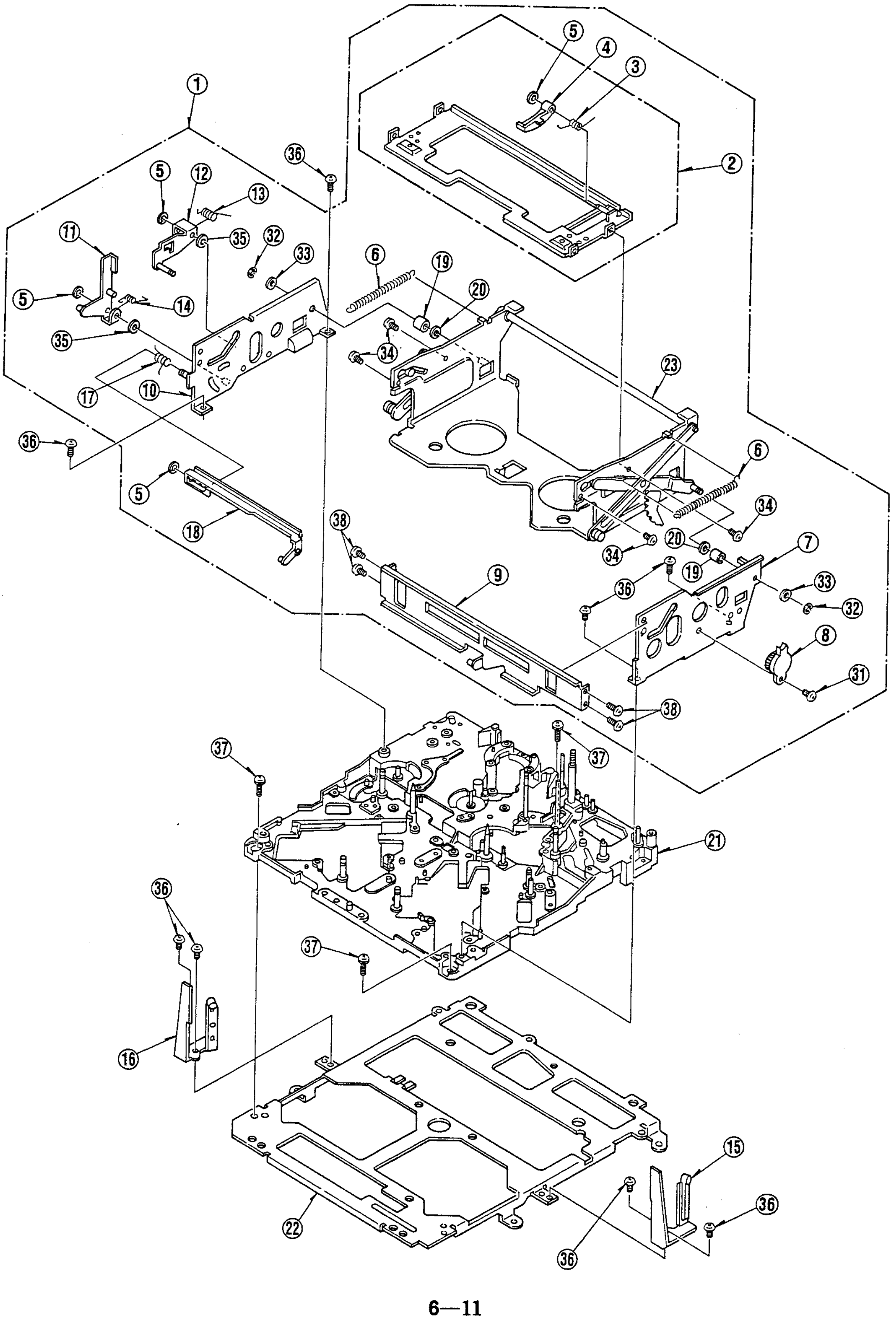
# MECHANICAL CHASSIS ASSEMBLY (2)

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| 1 | VXA5554 | A/C HEAD BASE (1)U | 1 | |
| 2 | VBR0301 | A/C HEAD | 1 | |
| 3 | VXA5555 | A/C HEAD BASE (2)U | 1 | |
| 4 | VMB2935 | A/C HEAD HIGHT SPRING | 1 | |
| 5 | VEG1337 | CYLINDER UNIT | 1 | |
| 6 | VMD2581 | EMARGENCY SHAFT HOLDER | 1 | |
| 7 | VEM0584 | LOADING MOTOR (1) U | 1 | |
| 8 | VSJ0217 | PINCH SOLENOID | 1 | |
| 9 | VXA5561 | MOTOR ANGLE U | 1 | |
| 10 | VES0814 | MODE SW U | 1 | |
| 11 | VMA9376 | PINCH SOLENOID BASE | 1 | |
| 12 | VXL2693 | CLEANING ARM N U | 1 | |
| 12-1 | VMX2150 | ROLLER HOLDER | 1 | |
| 12-2 | VXP1326 | CLEANER ROLLER UNIT | 1 | |
| 12-3 | VMB1677 | P9 POST SPRING | 1 | |
| 13 | VXL2707 | T2 ARM U. | 1 | |
| 13-1 | VMB2932 | T2 ARM SPRING | 1 | |
| 14 | VXL2688 | TENSION ARM U. | 1 | |
| 14-1 | VXP1761 | TENSION ROLLER | 1 | |
| 14-2 | VMB2931 | TENSION LEG SPRING | 1 | |
| 14-3 | VXA5551 | MAGNET HOLDER U | 1 | |
| 15 | VXA5791 | TENSION REG. SPRING HOOK U | 1 | |
| 16 | VXA5730 | S1 BOAT U. | 1 | |
| 17 | VMD2533 | LOADING RAIL | 1 | |
| 18 | VXA5568 | T1 BOART U | 1 | |
| 19 | VHD0561 | HEX. SCREW | 1 | |
| 20 | VXA5553 | S POST BASE U | 1 | |
| 21 | VXP1683 | T4 CONNECTION GEAR U | 1 | |
| 22 | VXL2687 | T4 ARM U. | 1 | |
| 23 | VMB2950 | T4 THRUST SPRING | 1 | |
| 24 | VXL2711 | T LOADING ARM U. | 1 | |
| 25 | VMS5906 | T3 UPPER FRANGE | 1 | |
| 26 | VMS5905 | T3 SLEAVE | 1 | |
| 27 | VMS5904 | T3 LOWER FRANGE | 1 | |
| 28 | VMB2929 | T3 SPRING | 1 | |
| 29 | VMB2933 | PINCH RELEASE SPRING | 1 | |
| 30 | VEK7927 | DEW SENSOR | 1 | |
| 31 | VEK7691 | LED HOLDER U. | 1 | |
| 32 | VMA9411 | PINCH SOLENOID ANGLE | 1 | |
| 33 | VXA5820 | TENSION SENSOR U. | 1 | |
| 34 | VXL2684 | PINCH ARM U. | 1 | |
| 35 | VXL2588 | PINCH GUIDE ARM U | 1 | |
| 36 | VXA5570 | T SECTOR GEAR U | 1 | |
| 37 | VXL2582 | TENSION LEG. GUIDE ARM U | 1 | |
| 38 | VXA5567 | S SECTOR GEAR U | 1 | |
| 39 | VXA5564 | T4 SECTOR GEAR U | 1 | |
| 40 | VXA5563 | MAIN ROD U | 1 | |
| 41 | VXA5627 | THRUST ROD HOLDER U | 1 | |
| 42 | VDG1166 | MOTOR WORM GEAR | 1 | |
| 43 | VDG1187 | MOTOR EMERGENCY GEAR B | 1 | |
| 44 | VDG1186 | MOTOR EMERGENCY GEAR A | 1 | |
| 45 | VXL2591 | MAIN CAM U | 1 | |
| 46 | VDG1168 | MAIN CAM GEAR | 1 | |
| 47 | VMB2937 | A/C HEAD ADJUST SPRING | 1 | |
| 48 | VXL2600 | EJECT ARM U. | 1 | |
| 49 | VXA5770 | T1 GUIDE U. | 1 | |
| 50 | VMB2934 | SPRING | 1 | |
| 51 | VMB3051 | CLEANER RETURN SPRING | 1 | |
| 52 | VXA5768 | CLEANER BASE 1 U. | 1 | |
| 53 | VXA5769 | CLEANER SOLENOID U. | 1 | |
| 54 | VMM0415 | CLEANER INTERLOCK | 1 | |
| 61 | VHD0356 | SCREW | 1 | |
| 62 | XQN2+A3 | SCREW | 2 | |
| 63 | XQN2+A2 | SCREW | 5 | |
| 64 | XQN2+A35FZ | SCREW | 3 | |
| 65 | XQN2+AM2 | SCREW | 1 | |
| 66 | XQN2+AM4 | SCREW | 1 | |
| 67 | XQN2+CF3 | SCREW | 4 | |
| 68 | XQN2+CF4 | SCREW | 8 | |
| 69 | XUC12FP | E-RING | 2 | |
| 70 | XVE2B4FZ | SCREW | 3 | |
| 71 | XVE2B6FP | SCREW | 1 | |
| 72 | XVE2B12FP | SCREW | 1 | |
| 73 | VXQ0439 | CYLINDER SCREW U. | 3 | |
| 74 | VMX0967 | WASHER | 5 | |
| 75 | VMX1061 | CUT WASHER | 3 | |
| 76 | VMX1079 | WASHER | 1 | |
| 77 | XWA2B | WASHER | 3 | |
| 78 | XWE2 | WASHER | 2 | |
| 79 | XWE16VW | WASHER | 1 | |
| 80 | XXE2A6FP | HEX. SCREW | 1 | |
| 81 | XWG2 | WASHER | 3 | |
| 82 | XWGV15Z32G | WASHER | 1 | |
| 83 | VHD0045 | NYLON NUT | 1 | |
| 84 | VHN0312 | T3 POST NUT | 2 | |
| 85 | XQN2+AG4 | SCREW | 1 | |
| 86 | XQN2+AJ5 | SCREW | 1 | |
| 87 | XQN2+A15 | SCREW | 4 | |

# CASSETTE COMPARTMENT ASSEMBLY



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# CASSETTE COMPARTMENT ASSEMBLY

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| 1 | VXA5601 | CASSETTE UP U | 1 | |
| 2 | VXA5604 | UPPER PLATE U | 1 | |
| 3 | VMB2962 | CASSETTE HOLD SPRING | 1 | |
| 4 | VML3100 | ADAPTOR STOPPER | 1 | |
| 5 | VMX0967 | WASHER | 4 | |
| 6 | VMB2982 | SPRING | 2 | |
| 7 | VXA5603 | SIDE PLATE (R)(1)U | 1 | |
| 8 | VXP1549 | DUMPER | 1 | |
| 9 | VXA5636 | LOWER PLATE U | 1 | |
| 10 | VXA5637 | SIDE PLATE (L)(1)U | 1 | |
| 11 | VXA5639 | RACHET LOCK COVER U | 1 | |
| 12 | VXA5638 | RACHET COVER U | 1 | |
| 13 | VMB2981 | SPRING | 1 | |
| 14 | VMB3025 | SPRING | 1 | |
| 15 | VXA5632 | T RECIEVER ANGLE U | 1 | |
| 16 | VXA5631 | S RECIEVER ANGLE U | 1 | |
| 17 | VMB2961 | SCREW | 1 | |
| 18 | VML3102 | RATCHET TIMING LEVER | 1 | |
| 19 | VDP0967 | MAIN ARM ROLLER | 2 | |
| 20 | XWGV4Y6G | WASHER | 2 | |
| 21 | VXK1272 | MECH CHASSIS | 1 | |
| 22 | VMA9379 | SUB CHASSIS | 1 | |
| 23 | VXA5605 | CUT HOLDER U | 1 | |
| | | | | |
| | | | | |
| | | | | |
| 31 | XQN2+A4 | SCREW | 1 | |
| 32 | XUC2FP | E-RING | 2 | |
| 33 | XWGV3Y5G | WASHER | 2 | |
| 34 | XQN14+A3 | SCREW | 4 | |
| 35 | XWGV2Y4G | WASHER | 2 | |
| 36 | XQN2+CF3 | SCREW | 8 | |
| 37 | XYN3+C5 | SCREW | 3 | |
| 38 | XQN2+A2 | SCREW | 4 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
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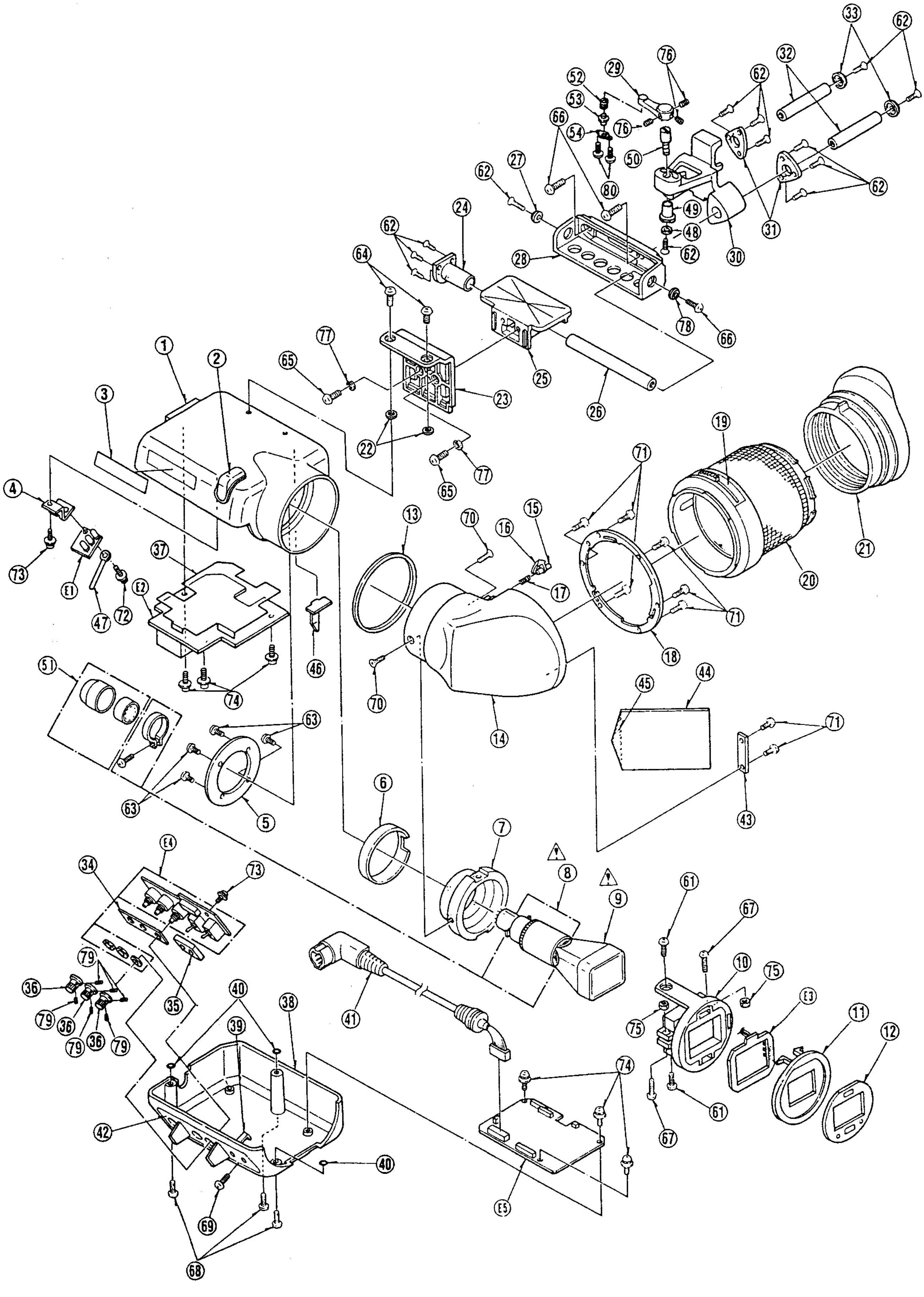
# EVF ASSEMBLY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# EVF ASSEMBLY

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| 1 | VGM1297 | UPPER BODY | 1 | |
| 2 | VGL0723 | UPPER TALLY | 1 | |
| 3 | VGB0437 | PANASONIC BADGE | 1 | |
| 4 | VMP4945 | TALLY .C.B. ANGLE | 1 | |
| 5 | VMX2536 | END CAP | 1 | |
| 6 | VMX2537 | SPACER | 1 | |
| 7 | VDB1421 | SLIP RING | 1 | |
| 8 | ELY15V114G | DEFLECTION YOKE | 1 | |
| 9 | M04KYS07WB | CRT | 1 | |
| 10 | VGP4348 | ESCUTCHEON (A) | 1 | |
| 11 | VGP4349 | ESCUTCHEON (B) | 1 | |
| 12 | VGH3884 | CRT NAME PLATE | 1 | |
| 13 | VMX2552 | RING | 1 | |
| 14 | VGP4205 | CRT CASE | 1 | |
| 15 | VMS6050 | LOCK PIN | 1 | |
| 16 | VGU7184 | MOUNT LOCK RING RELEASE | 1 | |
| 17 | VMB3026 | RELEASE SPRING | 1 | |
| 18 | VGP4206 | MOUNT RING | 1 | |
| 19 | VQL8238 | WIDE ADJ LABEL | 1 | |
| 20 | VYC0766 | EYE PIECE U | 1 | |
| 21 | VMG0799 | RUBBER CAP | 1 | |
| 22 | VMX1558 | WASHER | 2 | |
| 23 | VGM1267 | INSULATION TABLE | 1 | |
| 24 | VDB1393 | BUSHING | 1 | |
| 25 | VGM1266 | INSULATION TABLE | 1 | |
| 26 | VMS5862 | SHAFT B | 1 | |
| 27 | VGQ3989 | SHAFT STOPPER | 1 | |
| 28 | VGM1265 | PLATE B | 1 | |
| 29 | VGU7076 | EVF LOCK LEVER | 1 | |
| 30 | VGM1264 | PLATE A | 1 | |
| 31 | VDB1392 | BUSHING A | 2 | |
| 32 | VMS5861 | SHAFT A | 2 | |
| 33 | VGQ3989 | SHAFT STOPPER | 2 | |
| 34 | VMG0970 | SW SPACER | 1 | |
| 35 | VMG0975 | SW SHIELD RUBBER | 1 | |
| 36 | VGU7352 | VR KNOB A | 3 | |
| 37 | VMZ2577 | INSULATION PLATE | 1 | |
| 38 | VGM1309 | LOWER BODY | 1 | |
| 39 | VMP4946 | SW MOUNT PLATE | 1 | |
| 40 | VMG0981 | RING | 3 | |
| 41 | VJA0838 | INPUT CABLE | 1 | |
| 42 | VGH3813 | FRONT NAME PLATE | 1 | |
| 43 | VGQ4165 | HALF MIRROR HOLDER | 1 | |
| 44 | VDL0417 | HALF-MIRROR | 1 | |
| 45 | VGF0653 | NON REFLECTION SHEET | 1 | |
| 46 | VJF0947 | CORD KEEPER | 1 | |
| 47 | VJF1034 | CLAMPER | 1 | |
| 48 | VGQ3993 | LOCK RING | 1 | |
| 49 | VHD0991 | INSERT SCREW | 1 | |
| 50 | VHD0990 | LOCK SCREW | 1 | |
| 51 | VEE9446 | CRT SOCKET | 1 | |
| 52 | VMB3027 | SPRING | 1 | |
| 53 | VGQ4181 | LOCK SOCKET | 1 | |
| 54 | VMP5089 | COVER | 1 | |
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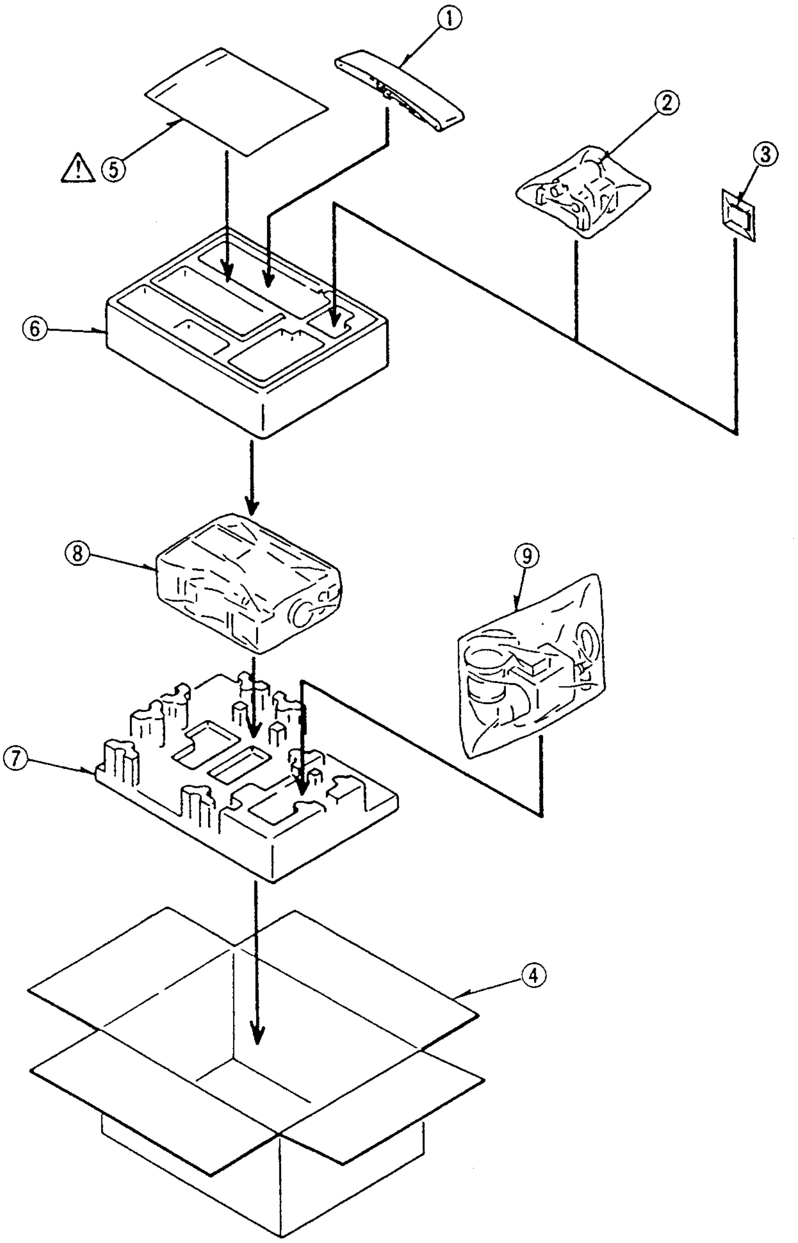
| | | | | |
| 61 | XQN26+A4 | SCREW | 2 | |
| 62 | XQS2+A6FZ | SCREW | 12 | |
| 63 | XSB26+6 | SCREW | 4 | |
| 64 | XSB3+6FZ | SCREW | 2 | |
| 65 | XSB3+8FZ | SCREW | 2 | |
| 66 | XSB4+8FZS | SCREW | 3 | |
| 67 | XSB2+12 | SCREW | 2 | |
| 68 | XSN26+10FZ | SCREW | 3 | |
| 69 | XSS2+4FZ | SCREW | 1 | |
| 70 | XSS26+6FZ | SCREW | 2 | |
| 71 | XTN2+5GFZ | SCREW | 8 | |
| 72 | XYN2+F6 | SCREW | 1 | |
| 73 | XYN2+K4 | SCREW | 2 | |
| 74 | XYN26+K5 | SCREW | 6 | |
| 75 | XNG2B | NUT | 2 | |
| 76 | XXEV3W3FP | SCREW | 3 | |
| 77 | XWA3BFZ | WASHER | 2 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| 78 | XWA4BFZ | WASHER | 1 | |
| 79 | XXEV16D2FP | SCREW | 6 | |
| 80 | XQN2+A3FZ | SCREW | 2 | |
| | | | | |
| | | | | |
| E1 | | F TALLY P.C.BOARD | 1 | |
| E2 | | H DEF P.C.BOARD | 1 | |
| E3 | | CRT MASK P.C.BOARD | 1 | |
| E4 | | VR SW P.C.BOARD | 1 | |
| E5 | | EVF VIDEO P.C.BOARD | 1 | |

# PACKING PARTS ASSEMBLY



# PACKING PARTS ASSEMBLY

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| 1 | VFC0604 | SHOULDER BELT | 1 | |
| 2 | VYP5934 | VIDEO IN ADAPTOR | 1 | |
| 3 | VEJ1672 | BATTERY ADAPTOR U | 1 | |
| 4 | VPG8167 | PACKING CASE | 1 | |
| 5 | VQT6268 | OPERATING INSTRUCTIONS | 1 | |
| 6 | VPN4298 | CUSHION (TOP) | 1 | |
| 7 | VPN4299 | CUSHION (BOTTOM) | 1 | |
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| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
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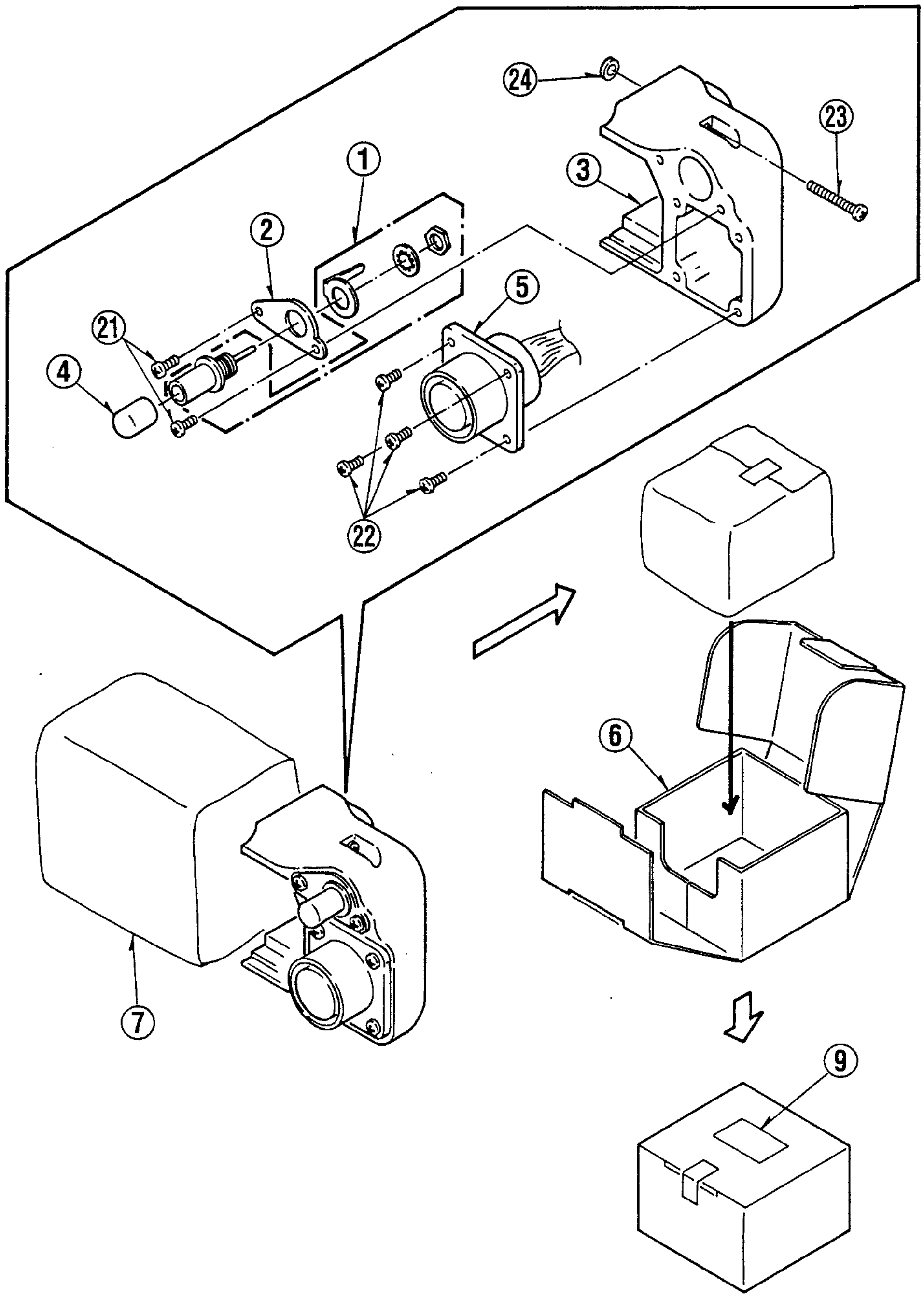
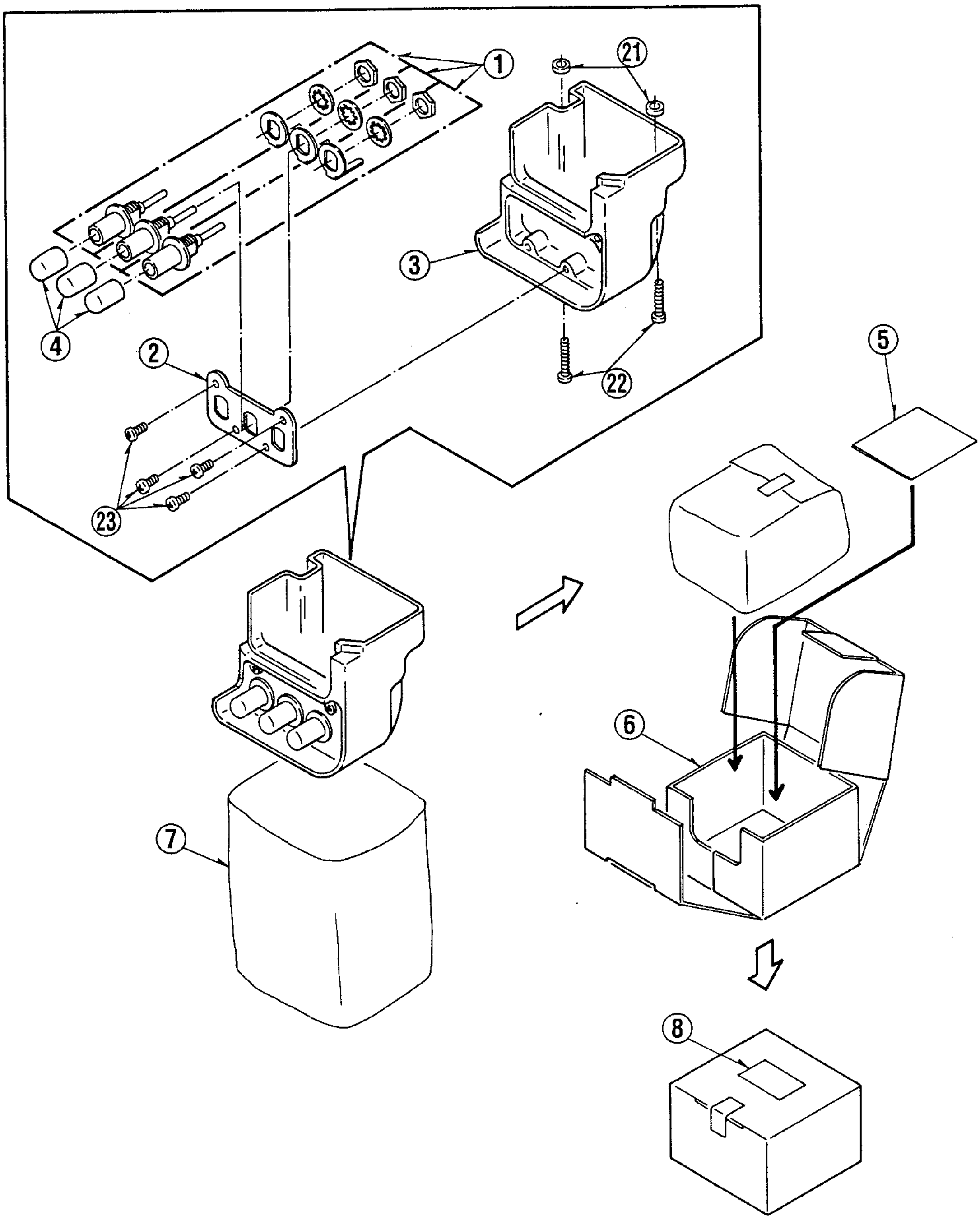
# AJ-YA700P ASSEMBLY



# AJ-YA700P ASSEMBLY

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks | Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 1 | VJS1440 | BNC | 1 | | | | | | |
| 2 | VMP4854 | BNC ANGLE | 1 | | | | | | |
| 3 | VGM1262 | CN MOUNT ANGLE | 1 | | | | | | |
| 4 | VGF0362 | BNC CAP | 1 | | | | | | |
| 5 | VEE9774 | 26P CN U. | 1 | | | | | | |
| 6 | VPG3121 | PACKING CASE | 1 | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| 21 | XSN26+6FZ | SCREW | 2 | | | | | | |
| 22 | XSN3+6FCS | SCREW | 4 | | | | | | |
| 23 | XSN3+30FZ | SCREW | 2 | | | | | | |
| 24 | VMX2606 | SPACER | 2 | | | | | | |
| | | | | | | | | | |

# AJ-YA710P ASSEMBLY



# AJ-YA710P ASSEMBLY

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| 1 | VJS1440 | BNC | 3 | |
| 2 | VMP5203 | BNC ANGLE | 1 | |
| 3 | VGM1356 | CN MOUNT ANGLE | 1 | |
| 4 | VGF0362 | BNC CAP | 3 | |
| 5 | VQT6716 | OPERATING INSTRUCTION | 1 | |
| 6 | VPG3121 | PACKING CASE | 1 | |
| | | | | |
| | | | | |
| 21 | VMX2606 | SPACER | 2 | |
| 22 | XSN3+30FZ | SCREW | 2 | |
| 23 | XSN26+6FZ | SCREW | 4 | |
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| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
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CDS/ PULSE
PRE PROC
C. SYSCON/ DSP
ENCODER/ SYNC
VIDEO IF/ V. SYSCON
SERVO/ RF
VIDEO MAIN
POWER
AUDIO LCD
OTHER

# ELECTRICAL REPLACEMENT PARTS LIST

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| ■ | VEP25016A | P. C. BOARD W/COMPONENT<br>CDS | 1 | (RTL) |
| ■ | VEP20533B | P. C. BOARD W/COMPONET<br>PULSE | 1 | (RTL) |
| ■ | VEP23278A | P. C. BOARD W/COMPONENT<br>PRE PROCESS 1 | 1 | (RTL) |
| ■ | VEP20534A | P. C. BOARD W/COMPONENT<br>CCD | 1 | (RTL) |
| ■ | VEP00W29A | P. C. BOARD W/COMPONENT<br>CAMERA FLEX | 1 | (RTL) |
| ■ | VEP00Y28A | P. C. BOARD W/COMPONENT<br>MOTHER | 1 | (RTL) |
| ■ | VEP26074C | P. C. BOARD W/COMPONENT<br>CAMERA SYSCON | 1 | (RTL) |
| ■ | VEP23275A | P. C. BOARD W/COMPONENT<br>CAMERA DSP | 1 | (RTL) |
| ■ | VEP23276B | P. C. BOARD W/COMPONENT<br>CAMERA ENCODER | 1 | (RTL) |
| ■ | VEP23277B | P. C. BOARD W/COMPONENT<br>CAMERA SYNC | 1 | (RTL) |
| ■ | VEP03D53A | P. C. BOARD W/COMPONENT<br>VIDEO IF | 1 | (RTL) |
| ■ | VEP03D84A | P. C. BOARD W/COMPONENT<br>VIDEO IF SUB | 1 | (RTL) |
| ■ | VEP06A22B | P. C. BOARD W/COMPONENT<br>VTR SYSCON | 1 | (RTL) |
| ■ | VEP02437B | P. C. BOARD W/COMPONENT<br>SERVO | 1 | (RTL) |
| ■ | VEP03B95A | P. C. BOARD W/COMPONENT<br>RF | 1 | (RTL) |
| ■ | VEP03B96B | P. C. BOARD W/COMPONENT<br>VIDEO MAIN | 1 | (RTL) |
| ■ | VEP01643A | P. C. BOARD W/COMPONENT<br>POWER | 1 | (RTL) |
| ■ | VEP04522B | P. C. BOARD W/COMPONENT<br>AUDIO LCD | 1 | (RTL) |
| ■ | VEP01786A | P. C. BOARD W/COMPONENT<br>REAR JACK | 1 | (RTL) |
| ■ | VEP80980A | P. C. BOARD W/COMPONENT<br>VTR FLEX | 1 | (RTL) |
| ■ | VEP00W03A | P. C. BOARD W/COMPONENT<br>POWER SW | 1 | (RTL) |
| ■ | VEP00W04A | P. C. BOARD W/COMPONENT<br>TOGGLE SW | 1 | (RTL) |
| ■ | VEP00W05A | P. C. BOARD W/COMPONENT<br>MODE CHECK | 1 | (RTL) |
| ■ | VEP00W07A | P. C. BOARD W/COMPONENT<br>ALARM/MONITOR | 1 | (RTL) |
| ■ | VEP80961B | P. C. BOARD W/COMPONENT<br>BACKUP BATT | 1 | (RTL) |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| ■ | VEP00W08B | P. C. BOARD W/COMPONENT<br>HEADPHONE | 1 | (RTL) |
| ■ | VEP00X87B | P. C. BOARD W/COMPONENT<br>DC INPUT | 1 | (RTL) |
| ■ | VEP20537A | P. C. BOARD W/COMPONENT<br>FRONT TOGGLE | 1 | (RTL) |
| ■ | VEP20538A | P. C. BOARD W/COMPONENT<br>FRONT | 1 | (RTL) |
| ■ | VEP86149A | P. C. BOARD W/COMPONENT<br>OPERATE | 1 | (RTL) |
| ■ | VEP80858A | P. C. BOARD W/COMPONENT<br>BACK TALLY | 1 | (RTL) |
| ■ | VEP80A14A | P. C. BOARD W/COMPONENT<br>FRONT MIC | 1 | (RTL) |
| ■ | VEP80A13A | P. C. BOARD W/COMPONENT<br>BNC | 1 | (RTL) |
| ■ | VEP86252A | P. C. BOARD W/COMPONENT<br>MEMORY CARD | 1 | (RTL) |
| ■ | VEP29019A | P. C. BOARD W/COMPONENT<br>H DEF | 1 | (RTL) |
| ■ | VEP29022A | P. C. BOARD W/COMPONENT<br>EVF VIDEO | 1 | (RTL) |
| ■ | VEP29020A | P. C. BOARD W/COMPONENT<br>EVF SWVR | 1 | (RTL) |
| ■ | VEP29021A | P. C. BOARD W/COMPONENT<br>F TALLY | 1 | (RTL) |
| ■ | VEP29023A | P. C. BOARD W/COMPONENT | 1 | (RTL) |

## VEP25016A

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| ■ | VEP25016A | P.C.BOARD W/COMPONENT | 1 | (RTL) |
| | | CDS | | |
| | | | | |
| | | | | |
| | | | | |
| C3004 | ECST1ED226Z | T.CAPACITOR CH 25V 22U | 1 | |
| C3005 | ECST1CX106Z | T.CAPACITOR CH 16V 10U | 1 | |
| C3006 | ECUX1H102JV | C.CAPACITOR CH 50V 1000P | 1 | |
| C3007 | ECST1ED226Z | T.CAPACITOR CH 25V 22U | 1 | |
| C3101 | ECST1CX106Z | T.CAPACITOR CH 16V 10U | 1 | |
| C3102 | ECST1EC106Z | T.CAPACITOR CH 25V 10U | 1 | |
| C3103,04 | ECUX1H470JCV | C.CAPACITOR CH 50V 47P | 2 | |
| C3105 | ECST1ED226Z | T.CAPACITOR CH 25V 22U | 1 | |
| C3106,07 | ECUX1H470JCV | C.CAPACITOR CH 50V 47P | 2 | |
| C3108 | ECST1EC106Z | T.CAPACITOR CH 25V 10U | 1 | |
| C3109 | ECUX1H100DCV | C.CAPACITOR CH 50V 10P | 1 | |
| C3111 | ECST1CX106Z | T.CAPACITOR CH 16V 10U | 1 | |
| C3112 | ECST1ED226Z | T.CAPACITOR CH 25V 22U | 1 | |
| C3114 | ECUX1H030CCV | C.CAPACITOR CH 50V 3P | 1 | |
| C3115 | ECUX1H180JCV | C.CAPACITOR CH 50V 18P | 1 | |
| C3116 | ECUX1H150JCV | C.CAPACITOR CH 50V 15P | 1 | |
| C3117 | ECUX1H180JCV | C.CAPACITOR CH 50V 18P | 1 | |
| C3201 | ECST1CX106Z | T.CAPACITOR CH 16V 10U | 1 | |
| C3202 | ECST1EC106Z | T.CAPACITOR CH 25V 10U | 1 | |
| C3203,04 | ECUX1H470JCV | C.CAPACITOR CH 50V 47P | 2 | |
| C3205 | ECST1ED226Z | T.CAPACITOR CH 25V 22U | 1 | |
| C3206,07 | ECUX1H470JCV | C.CAPACITOR CH 50V 47P | 2 | |
| C3208 | ECST1EC106Z | T.CAPACITOR CH 25V 10U | 1 | |
| C3209 | ECUX1H100DCV | C.CAPACITOR CH 50V 10P | 1 | |
| C3211 | ECST1CX106Z | T.CAPACITOR CH 16V 10U | 1 | |
| C3212 | ECST1ED226Z | T.CAPACITOR CH 25V 22U | 1 | |
| C3214 | ECUX1H030CCV | C.CAPACITOR CH 50V 3P | 1 | |
| C3215 | ECUX1H180JCV | C.CAPACITOR CH 50V 18P | 1 | |
| C3216 | ECUX1H150JCV | C.CAPACITOR CH 50V 15P | 1 | |
| C3217 | ECUX1H180JCV | C.CAPACITOR CH 50V 18P | 1 | |
| C3301 | ECST1CX106Z | T.CAPACITOR CH 16V 10U | 1 | |
| C3302 | ECST1EC106Z | T.CAPACITOR CH 25V 10U | 1 | |
| C3303,04 | ECUX1H470JCV | C.CAPACITOR CH 50V 47P | 2 | |
| C3305 | ECST1ED226Z | T.CAPACITOR CH 25V 22U | 1 | |
| C3306,07 | ECUX1H470JCV | C.CAPACITOR CH 50V 47P | 2 | |
| C3308 | ECST1EC106Z | T.CAPACITOR CH 25V 10U | 1 | |
| C3309 | ECUX1H100DCV | C.CAPACITOR CH 50V 10P | 1 | |
| C3311 | ECST1CX106Z | T.CAPACITOR CH 16V 10U | 1 | |
| C3312 | ECST1ED226Z | T.CAPACITOR CH 25V 22U | 1 | |
| C3314 | ECUX1H030CCV | C.CAPACITOR CH 50V 3P | 1 | |
| C3315 | ECUX1H180JCV | C.CAPACITOR CH 50V 18P | 1 | |
| C3316 | ECUX1H150JCV | C.CAPACITOR CH 50V 15P | 1 | |
| C3317 | ECUX1H180JCV | C.CAPACITOR CH 50V 18P | 1 | |
| | | | | |
| D3001 | MA3047-M | DIODE | 1 | |
| D3102 | MA151K | DIODE | 1 | |
| D3202 | MA151K | DIODE | 1 | |
| D3302 | MA151K | DIODE | 1 | |
| | | | | |
| IC3001 | NJM431U | IC | 1 | |
| IC3002 | NJM2904M | IC | 1 | |
| | | | | |
| L3101 | VLQ0163J2R7 | COIL 2.7UH | 1 | |
| L3201 | VLQ0163J2R7 | COIL 2.7UH | 1 | |
| L3301 | VLQ0163J2R7 | COIL 2.7UH | 1 | |
| | | | | |
| P3001 | VJP3125B006 | CONNECTOR (MALE) 6P | 1 | |
| P3002 | VJP3550B014 | CONNECTOR (MALE) | 1 | |
| P3003 | VJP3125B006 | CONNECTOR (MALE) 6P | 1 | |
| | | | | |
| Q3001 | 2SB956-R | TRANSISTOR | 1 | |
| Q3101 | 2SA1022-B | TRANSISTOR | 1 | |
| Q3102 | 3SK157J15 | TRANSISTOR | 1 | |
| Q3103 | 2SC2295-B | TRANSISTOR | 1 | |
| Q3104 | 2SA1022-B | TRANSISTOR | 1 | |
| Q3105 | 3SK157J15 | TRANSISTOR | 1 | |
| Q3106 | 2SC2295-B | TRANSISTOR | 1 | |
| Q3107 | 2SA1022-B | TRANSISTOR | 1 | |
| Q3108 | 3SK157J15 | TRANSISTOR | 1 | |
| | | | | |
| | | | | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| Q3109 | 2SC2295-B | TRANSISTOR | 1 | |
| Q3110 | 2SA1022-B | TRANSISTOR | 1 | |
| Q3111 | 3SK157J15 | TRANSISTOR | 1 | |
| Q3112 | 2SC2295-B | TRANSISTOR | 1 | |
| Q3113 | 2SA1022-B | TRANSISTOR | 1 | |
| Q3114 | 3SK157J15 | TRANSISTOR | 1 | |
| Q3115-19 | 2SC2295-B | TRANSISTOR | 5 | |
| Q3120 | 2SD601A-R | TRANSISTOR | 1 | |
| Q3121,22 | 2SA1226 | TRANSISTOR | 2 | |
| Q3123 | 2SB710A-R | TRANSISTOR | 1 | |
| Q3201 | 2SA1022-B | TRANSISTOR | 1 | |
| Q3202 | 3SK157J15 | TRANSISTOR | 1 | |
| Q3203 | 2SC2295-B | TRANSISTOR | 1 | |
| Q3204 | 2SA1022-B | TRANSISTOR | 1 | |
| Q3205 | 3SK157J15 | TRANSISTOR | 1 | |
| Q3206 | 2SC2295-B | TRANSISTOR | 1 | |
| Q3207 | 2SA1022-B | TRANSISTOR | 1 | |
| Q3208 | 3SK157J15 | TRANSISTOR | 1 | |
| Q3209 | 2SC2295-B | TRANSISTOR | 1 | |
| Q3210 | 2SA1022-B | TRANSISTOR | 1 | |
| Q3211 | 3SK157J15 | TRANSISTOR | 1 | |
| Q3212 | 2SC2295-B | TRANSISTOR | 1 | |
| Q3213 | 2SA1022-B | TRANSISTOR | 1 | |
| Q3214 | 3SK157J15 | TRANSISTOR | 1 | |
| Q3215-19 | 2SC2295-B | TRANSISTOR | 5 | |
| Q3220 | 2SD601A-R | TRANSISTOR | 1 | |
| Q3221,22 | 2SA1226 | TRANSISTOR | 2 | |
| Q3301 | 2SA1022-B | TRANSISTOR | 1 | |
| Q3302 | 3SK157J15 | TRANSISTOR | 1 | |
| Q3303 | 2SC2295-B | TRANSISTOR | 1 | |
| Q3304 | 2SA1022-B | TRANSISTOR | 1 | |
| Q3305 | 3SK157J15 | TRANSISTOR | 1 | |
| Q3306 | 2SC2295-B | TRANSISTOR | 1 | |
| Q3307 | 2SA1022-B | TRANSISTOR | 1 | |
| Q3308 | 3SK157J15 | TRANSISTOR | 1 | |
| Q3309 | 2SC2295-B | TRANSISTOR | 1 | |
| Q3310 | 2SA1022-B | TRANSISTOR | 1 | |
| Q3311 | 3SK157J15 | TRANSISTOR | 1 | |
| Q3312 | 2SC2295-B | TRANSISTOR | 1 | |
| Q3313 | 2SA1022-B | TRANSISTOR | 1 | |
| Q3314 | 3SK157J15 | TRANSISTOR | 1 | |
| Q3315-19 | 2SC2295-B | TRANSISTOR | 5 | |
| Q3321,22 | 2SA1226 | TRANSISTOR | 2 | |
| Q3323 | 2SD601A-R | TRANSISTOR | 1 | |
| | | | | |
| QR3101,02 | UN2217 | TRANSISTOR-RESISTOR | 2 | |
| QR3201,02 | UN2217 | TRANSISTOR-RESISTOR | 2 | |
| QR3301,02 | UN2217 | TRANSISTOR-RESISTOR | 2 | |
| | | | | |
| R3001 | VRE0071E473 | M.RESISTOR CH1/16W 47K | 1 | |
| R3002 | VRE0071E273 | M.RESISTOR CH 1/10W 27K | 1 | |
| R3003 | VRE0071E473 | M.RESISTOR CH1/16W 47K | 1 | |
| R3004 | VRE0071E273 | M.RESISTOR CH 1/10W 27K | 1 | |
| R3005 | VRE0071E432 | M.RESISTOR CH 1/10W 4.3K | 1 | |
| R3007 | VRE0071E563 | M.RESISTOR CH 1/16W 56K | 1 | |
| R3008 | VRE0071E332 | M.RESISTOR CH1/16W 3.3K | 1 | |
| R3009 | VRE0071E101 | M.RESISTOR CH 1/10W 100 | 1 | |
| R3010,11 | VRE0071E563 | M.RESISTOR CH 1/16W 56K | 2 | |
| R3012 | VRE0071E333 | M.RESISTOR CH 1/16W 33K | 1 | |
| R3101 | VRE0071E303 | M.RESISTOR CH 1/10W 30K | 1 | |
| R3102 | VRE0071E273 | M.RESISTOR CH 1/10W 27K | 1 | |
| R3103 | VRE0071E221 | M.RESISTOR CH 1/10W 220 | 1 | |
| R3104 | VRE0071E272 | M.RESISTOR CH 1/10W 2.7K | 1 | |
| R3105 | VRE0071E220 | M.RESISTOR CH 1/10W 22 | 1 | |
| R3106 | VRE0071E102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R3107 | VRE0071E153 | M.RESISTOR CH 1/16W 15K | 1 | |
| R3108 | VRE0071E472 | M.RESISTOR CH 1/10W 4.7K | 1 | |
| R3109 | VRE0071E220 | M.RESISTOR CH 1/10W 22 | 1 | |
| R3110 | VRE0071E153 | M.RESISTOR CH 1/16W 15K | 1 | |
| R3111 | VRE0071E221 | M.RESISTOR CH 1/10W 220 | 1 | |
| R3112 | VRE0071E472 | M.RESISTOR CH 1/10W 4.7K | 1 | |
| R3113 | VRE0071E220 | M.RESISTOR CH 1/10W 22 | 1 | |
| R3114 | VRE0071E153 | M.RESISTOR CH 1/16W 15K | 1 | |
| R3115 | VRE0071E472 | M.RESISTOR CH 1/10W 4.7K | 1 | |
| R3116 | VRE0071E220 | M.RESISTOR CH 1/10W 22 | 1 | |
| | | | | |
| | | | | |

VEP25016A

| Ref.No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R3117 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3118 | VRE0071E153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R3119 | VRE0071E472 | M. RESISTOR CH 1/10W 4.7K | 1 | |
| R3120 | VRE0071E220 | M. RESISTOR CH 1/10W 22 | 1 | |
| R3121 | VRE0071E153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R3124 | VRE0071E301 | M. RESISTOR CH 1/10W 300 | 1 | |
| R3125 | VRE0071E182 | M. RESISTOR CH 1/10W 1.8K | 1 | |
| R3126 | VRE0071E301 | M. RESISTOR CH 1/10W 300 | 1 | |
| R3127 | VRE0071E182 | M. RESISTOR CH 1/10W 1.8K | 1 | |
| R3128 | VRE0071E122 | M. RESISTOR CH 1/10W 1.2K | 1 | |
| R3129-31 | VRE0071E472 | M. RESISTOR CH 1/10W 4.7K | 3 | |
| R3132, 33 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R3134 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3136 | VRE0071E163 | M. RESISTOR CH1/16W 16K | 1 | |
| R3137 | VRE0071E561 | M. RESISTOR CH 1/16W 560 | 1 | |
| R3139 | VRE0071E392 | M. RESISTOR CH 1/10W 3.9K | 1 | |
| R3140 | VRE0071E822 | M. RESISTOR CH 1/10W 8.2K | 1 | |
| R3141 | VRE0071E241 | M. RESISTOR CH 1/10W 240 | 1 | |
| R3142 | VRE0071E101 | M. RESISTOR CH 1/10W 100 | 1 | |
| R3143 | VRE0071E242 | M. RESISTOR CH 1/10W 2.4K | 1 | |
| R3144, 45 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R3146 | VRE0071E122 | M. RESISTOR CH 1/10W 1.2K | 1 | |
| R3147 | VRE0071E392 | M. RESISTOR CH 1/10W 3.9K | 1 | |
| R3201 | VRE0071E303 | M. RESISTOR CH 1/10W 30K | 1 | |
| R3202 | VRE0071E273 | M. RESISTOR CH 1/10W 27K | 1 | |
| R3203 | VRE0071E221 | M. RESISTOR CH 1/10W 220 | 1 | |
| R3204 | VRE0071E272 | M. RESISTOR CH 1/10W 2.7K | 1 | |
| R3205 | VRE0071E220 | M. RESISTOR CH 1/10W 22 | 1 | |
| R3206 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3207 | VRE0071E153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R3208 | VRE0071E472 | M. RESISTOR CH 1/10W 4.7K | 1 | |
| R3209 | VRE0071E220 | M. RESISTOR CH 1/10W 22 | 1 | |
| R3210 | VRE0071E153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R3211 | VRE0071E221 | M. RESISTOR CH 1/10W 220 | 1 | |
| R3212 | VRE0071E472 | M. RESISTOR CH 1/10W 4.7K | 1 | |
| R3213 | VRE0071E220 | M. RESISTOR CH 1/10W 22 | 1 | |
| R3214 | VRE0071E153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R3215 | VRE0071E472 | M. RESISTOR CH 1/10W 4.7K | 1 | |
| R3216 | VRE0071E220 | M. RESISTOR CH 1/10W 22 | 1 | |
| R3217 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3218 | VRE0071E153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R3219 | VRE0071E472 | M. RESISTOR CH 1/10W 4.7K | 1 | |
| R3220 | VRE0071E220 | M. RESISTOR CH 1/10W 22 | 1 | |
| R3221 | VRE0071E153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R3224 | VRE0071E301 | M. RESISTOR CH 1/10W 300 | 1 | |
| R3225 | VRE0071E182 | M. RESISTOR CH 1/10W 1.8K | 1 | |
| R3226 | VRE0071E301 | M. RESISTOR CH 1/10W 300 | 1 | |
| R3227 | VRE0071E182 | M. RESISTOR CH 1/10W 1.8K | 1 | |
| R3228 | VRE0071E122 | M. RESISTOR CH 1/10W 1.2K | 1 | |
| R3229-31 | VRE0071E472 | M. RESISTOR CH 1/10W 4.7K | 3 | |
| R3232, 33 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R3234 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3239 | VRE0071E622 | M. RESISTOR CH 1/10W 6.2K | 1 | |
| R3241 | VRE0071E241 | M. RESISTOR CH 1/10W 240 | 1 | |
| R3242 | VRE0071E101 | M. RESISTOR CH 1/10W 100 | 1 | |
| R3243 | VRE0071E242 | M. RESISTOR CH 1/10W 2.4K | 1 | |
| R3244, 45 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R3246 | VRE0071E122 | M. RESISTOR CH 1/10W 1.2K | 1 | |
| R3247 | VRE0071E392 | M. RESISTOR CH 1/10W 3.9K | 1 | |
| R3301 | VRE0071E303 | M. RESISTOR CH 1/10W 30K | 1 | |
| R3302 | VRE0071E273 | M. RESISTOR CH 1/10W 27K | 1 | |
| R3303 | VRE0071E221 | M. RESISTOR CH 1/10W 220 | 1 | |
| R3304 | VRE0071E272 | M. RESISTOR CH 1/10W 2.7K | 1 | |
| R3305 | VRE0071E220 | M. RESISTOR CH 1/10W 22 | 1 | |
| R3306 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3307 | VRE0071E153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R3308 | VRE0071E472 | M. RESISTOR CH 1/10W 4.7K | 1 | |
| R3309 | VRE0071E220 | M. RESISTOR CH 1/10W 22 | 1 | |
| R3310 | VRE0071E153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R3311 | VRE0071E221 | M. RESISTOR CH 1/10W 220 | 1 | |
| R3312 | VRE0071E472 | M. RESISTOR CH 1/10W 4.7K | 1 | |
| R3313 | VRE0071E220 | M. RESISTOR CH 1/10W 22 | 1 | |
| R3314 | VRE0071E153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R3315 | VRE0071E472 | M. RESISTOR CH 1/10W 4.7K | 1 | |
| R3316 | VRE0071E220 | M. RESISTOR CH 1/10W 22 | 1 | |

| Ref.No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R3317 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3318 | VRE0071E153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R3319 | VRE0071E472 | M. RESISTOR CH 1/10W 4.7K | 1 | |
| R3320 | VRE0071E220 | M. RESISTOR CH 1/10W 22 | 1 | |
| R3321 | VRE0071E153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R3324 | VRE0071E181 | M. RESISTOR CH 1/10W 180 | 1 | |
| R3325 | VRE0071E182 | M. RESISTOR CH 1/10W 1.8K | 1 | |
| R3326 | VRE0071E181 | M. RESISTOR CH 1/10W 180 | 1 | |
| R3327 | VRE0071E182 | M. RESISTOR CH 1/10W 1.8K | 1 | |
| R3328 | VRE0071E122 | M. RESISTOR CH 1/10W 1.2K | 1 | |
| R3329 | VRE0071E472 | M. RESISTOR CH 1/10W 4.7K | 1 | |
| R3330, 31 | VRE0071E682 | M. RESISTOR CH1/16W 6.8K | 2 | |
| R3332, 33 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R3334 | VRE0071E751 | M. RESISTOR CH 1/10W 750 | 1 | |
| R3339 | VRE0071E182 | M. RESISTOR CH 1/10W 1.8K | 1 | |
| R3341 | VRE0071E241 | M. RESISTOR CH 1/10W 240 | 1 | |
| R3342 | VRE0071E101 | M. RESISTOR CH 1/10W 100 | 1 | |
| R3343 | VRE0071E242 | M. RESISTOR CH 1/10W 2.4K | 1 | |
| R3344, 45 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R3346 | VRE0071E122 | M. RESISTOR CH 1/10W 1.2K | 1 | |
| R3347 | VRE0071E392 | M. RESISTOR CH 1/10W 3.9K | 1 | |
| | | | | |
| TG3001, 02 | EYF6CU | TEST POINT | 2 | |
| | | | | |
| VC3101 | VCV0048 | TRIMMER | 1 | |
| VC3201 | VCV0048 | TRIMMER | 1 | |
| VC3301 | VCV0048 | TRIMMER | 1 | |
| | | | | |
| VR3101 | VRV0113B502 | V. RESISTOR 5K | 1 | |
| VR3102 | VRV0113B203 | V. RESISTOR 20K | 1 | |
| VR3201 | VRV0113B502 | V. RESISTOR 5K | 1 | |
| VR3202 | VRV0113B203 | V. RESISTOR 20K | 1 | |
| VR3301 | VRV0113B502 | V. RESISTOR 5K | 1 | |
| VR3302 | VRV0113B203 | V. RESISTOR 20K | 1 | |

VEP20533B

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| ■ | VEP20533B | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | PULSE | | |
| | | | | |
| | | | | |
| | | | | |
| C1 | ECUX1H820JCV | C. CAPACITOR CH 50V 82P | 1 | |
| C3 | ECST1CD336Z | T. CAPACITOR CH 16V 33U | 1 | |
| C4 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C5 | ECUX1H820JCV | C. CAPACITOR CH 50V 82P | 1 | |
| C6 | ECUX1H680JCV | C. CAPACITOR CH 50V 68P | 1 | |
| C9 | ECUX1H390JCV | C. CAPACITOR CH 50V 39P | 1 | |
| C10 | ECUX1H100DCV | C. CAPACITOR CH 50V 10P | 1 | |
| C15 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C16 | ECUX1H102JV | C. CAPACITOR CH 50V 1000P | 1 | |
| C17 | ECUX1H680JCV | C. CAPACITOR CH 50V 68P | 1 | |
| C18 | ECWV1E333JS | P. CAPACITOR CH 25V 0. 033U | 1 | |
| C19 | ECEV0JV470Q | E. CAPACITOR CH6. 3V 47U | 1 | |
| C20 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C21 | ECEV1EV330Q | E. CAPACITOR CH 25V 33U | 1 | |
| C22-24 | ECEV1CV470Q | E. CAPACITOR CH 16V 47U | 3 | |
| C28, 29 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C34 | ECST1CY105Z | T. CAPACITOR CH 16V 1U | 1 | |
| C35 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C36 | ECEV0JV101Q | E. CAPACITOR CH6. 3V 100U | 1 | |
| C37 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C38 | ECA1EFQ181 | E. CAPACITOR 25V 180U | 1 | |
| C39 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C40 | ECA1CFQ121 | E. CAPACITOR 16V 120U | 1 | |
| C41 | ECST1EX335Z | T. CAPACITOR CH 25V 3. 3U | 1 | |
| C43 | ECEV1CV470Q | E. CAPACITOR CH 16V 47U | 1 | |
| C45 | ECEV1CV470Q | E. CAPACITOR CH 16V 47U | 1 | |
| C46 | ECEV1HV2R2Q | E. CAPACITOR CH 50V 2. 2U | 1 | |
| C48 | ECEV1EV330Q | E. CAPACITOR CH 25V 33U | 1 | |
| C50 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C52, 53 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C55-57 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C58, 59 | ECUX1H102JV | C. CAPACITOR CH 50V 1000P | 2 | |
| C60 | ECUX1H821JV | C. CAPACITOR CH 50V 820P | 1 | |
| C61 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C62 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C63 | ECEV0JV101Q | E. CAPACITOR CH6. 3V 100U | 1 | |
| C64 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C65 | ECEV0JV101Q | E. CAPACITOR CH6. 3V 100U | 1 | |
| C66 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C68 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C69 | ECEV0JV101Q | E. CAPACITOR CH6. 3V 100U | 1 | |
| C70, 71 | ECEV1CV470Q | E. CAPACITOR CH 16V 47U | 2 | |
| C72 | ECEV1EV330Q | E. CAPACITOR CH 25V 33U | 1 | |
| C73 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C77 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C78 | ECA1CFQ332 | E. CAPACITOR 16V 3300U | 1 | |
| C522 | ECEV1EV330Q | E. CAPACITOR CH 25V 33U | 1 | |
| | | | | |
| D3 | MA3024 | DIODE | 1 | |
| D4 | MA3068-M | DIODE | 1 | |
| D5 | MA3047-M | DIODE | 1 | |
| D6 | MA152K | DIODE | 1 | |
| D7 | MA153 | DIODE | 1 | |
| D8 | MA152K | DIODE | 1 | |
| D9 | MA704 | DIODE | 1 | |
| | | | | |
| IC1 | MN53003XCU | IC | 1 | |
| IC2 | MN53020XXF | IC | 1 | |
| IC3 | MC74HC244AF | IC | 1 | |
| IC5 | MC74HC244AF | IC | 1 | |
| IC6 | MC74HC4538AF | IC | 1 | |
| IC7 | MC74HC08AF | IC | 1 | |
| IC8 | MC74HC00AF | IC | 1 | |
| IC9 | MC74HC08AF | IC | 1 | |
| IC10 | MC74HC04AF | IC | 1 | |
| IC13 | NJM431U | IC | 1 | |
| IC14 | NJM2904M | IC | 1 | |
| IC15 | NJM431U | IC | 1 | |
| IC16 | NJM2904M | IC | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| IC17 | MC74HC74AF | IC | 1 | |
| IC18 | MC74HC08AF | IC | 1 | |
| IC19 | MC74HC157AF | IC | 1 | |
| IC20 | NJM2904M | IC | 1 | |
| | | | | |
| L1 | VLP0147 | COIL | 1 | |
| L3-L6 | VLP0147 | COIL | 4 | |
| | | | | |
| P1 | VJS2907D025 | CONNECTOR (FEMALE) | 1 | |
| P2, P3 | VJP3422B018 | CONNECTOR (MALE) | 2 | |
| P4 | VJS3550A014 | CONNECTOR (FEMALE) | 1 | |
| | | | | |
| Q3, Q4 | 2SB956-R | TRANSISTOR | 2 | |
| Q5 | 2SD1280-R | TRANSISTOR | 1 | |
| Q6 | 2SB709A-R | TRANSISTOR | 1 | |
| Q7 | 2SD601A-R | TRANSISTOR | 1 | |
| Q9 | 2SB709A-R | TRANSISTOR | 1 | |
| Q10 | 2SD1280-R | TRANSISTOR | 1 | |
| Q11, 12 | 2SC3734B24 | TRANSISTOR | 2 | |
| Q13 | 2SB709A-R | TRANSISTOR | 1 | |
| Q14 | 2SD601A-R | TRANSISTOR | 1 | |
| Q15, 16 | 2SC3735B35 | TRANSISTOR | 2 | |
| Q17-19 | 2SD601A-R | TRANSISTOR | 3 | |
| | | | | |
| R1-R9 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 9 | |
| R12 | VRE0071E561 | M. RESISTOR CH 1/16W 560 | 1 | |
| R13 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R16, 17 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R20-23 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 4 | |
| R25, 26 | VRE0071E470 | M. RESISTOR CH 1/10W 47 | 2 | |
| R27-29 | VRE0071E820 | M. RESISTOR CH 1/10W 82 | 3 | |
| R30-32 | VRE0071E101 | M. RESISTOR CH 1/10W 100 | 3 | |
| R38-40 | VRE0071E102 | M. RESISTOR CH1/16W 1K | 3 | |
| R42 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R43, 44 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 2 | |
| R45, 46 | VRE0071E391 | M. RESISTOR CH 1/10W 390 | 2 | |
| R47 | VRE0071E562 | M. RESISTOR CH 1/16W 5. 6K | 1 | |
| R48 | VRE0071E123 | M. RESISTOR CH 1/16W 12K | 1 | |
| R49 | VRE0071E473 | M. RESISTOR CH1/16W 47K | 1 | |
| R50 | VRE0071E562 | M. RESISTOR CH 1/16W 5. 6K | 1 | |
| R51 | VRE0071E123 | M. RESISTOR CH 1/16W 12K | 1 | |
| R52 | VRE0071E473 | M. RESISTOR CH1/16W 47K | 1 | |
| R53 | VRE0071E562 | M. RESISTOR CH 1/16W 5. 6K | 1 | |
| R54 | VRE0071E123 | M. RESISTOR CH 1/16W 12K | 1 | |
| R55 | VRE0071E473 | M. RESISTOR CH1/16W 47K | 1 | |
| R76 | VRE0071E102 | M. RESISTOR CH1/16W 1K | 1 | |
| R77 | VRE0071E153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R78 | VRE0071E332 | M. RESISTOR CH1/16W 3. 3K | 1 | |
| R79, 80 | VRE0071E223 | M. RESISTOR CH1/16W 22K | 2 | |
| R81 | VRE0071E332 | M. RESISTOR CH1/16W 3. 3K | 1 | |
| R82 | VRE0071E101 | M. RESISTOR CH 1/10W 100 | 1 | |
| R83 | VRE0071E303 | M. RESISTOR CH 1/10W 30K | 1 | |
| R84 | VRE0071E562 | M. RESISTOR CH 1/16W 5. 6K | 1 | |
| R85 | VRE0071E332 | M. RESISTOR CH1/16W 3. 3K | 1 | |
| R86 | VRE0071E101 | M. RESISTOR CH 1/10W 100 | 1 | |
| R87, 88 | VRE0071E563 | M. RESISTOR CH1/16W 56K | 2 | |
| R89 | VRE0071E102 | M. RESISTOR CH1/16W 1K | 1 | |
| R90 | VRE0071E153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R91 | VRE0071E473 | M. RESISTOR CH1/16W 47K | 1 | |
| R92 | VRE0071E363 | M. RESISTOR CH 1/10W 36K | 1 | |
| R93 | VRE0071E333 | M. RESISTOR CH 1/16W 33K | 1 | |
| R94 | VRE0071E393 | M. RESISTOR CH 1/16W 39K | 1 | |
| R95-97 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 3 | |
| R98 | VRE0071E151 | M. RESISTOR CH 1/10W 150 | 1 | |
| R99 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 1 | |
| R101 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 1 | |
| R102 | VRE0071E152 | M. RESISTOR CH 1/10W 1. 5K | 1 | |
| R103 | VRE0071E822 | M. RESISTOR CH 1/10W 8. 2K | 1 | |
| R104 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 1 | |
| R105 | VRE0071E122 | M. RESISTOR CH 1/10W 1. 2K | 1 | |
| R106 | VRE0071E102 | M. RESISTOR CH1/16W 1K | 1 | |
| R107 | VRE0071E621 | M. RESISTOR CH 1/10W 620 | 1 | |
| R108-10 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 3 | |
| R112 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R113 | ERJ3GEYJ474 | M. RESISTOR CH 1/16W 470K | 1 | |

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| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R117 | VRE0071E101 | M. RESISTOR CH 1/10W 100 | 1 | |
| R121-23 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 3 | |
| R124 | VRE0071E104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R125 | VRE0071E222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R127, 28 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R138 | ERJ6GEY0R00 | M. RESISTOR CH 1/10W 0 | 1 | |
| R149 | ERJ6GEY0R00 | M. RESISTOR CH 1/10W 0 | 1 | |
| R160 | VRE0071E100 | M. RESISTOR CH 1/10W 10 | 1 | |
| R162 | ERJ6GEY0R00 | M. RESISTOR CH 1/10W 0 | 1 | |
| R163, 64 | VRE0071E560 | M. RESISTOR CH 1/10W 56 | 2 | |
| R165 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R167 | VRE0071E390 | M. RESISTOR CH 1/10W 39 | 1 | |
| R168, 69 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R174 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R176 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R180 | VRE0071E471 | M. RESISTOR CH 1/10W 470 | 1 | |
| R182 | VRE0071E182 | M. RESISTOR CH 1/10W 1. 8K | 1 | |
| R186 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R188-90 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 3 | |
| | | | | |
| TG1, G2 | EYF6CU | TEST POINT | 2 | |
| | | | | |
| VR1-R6 | VRV0161B501 | V. RESISTOR 500 | 6 | |
| VR7-R9 | VRV0161B503 | V. RESISTOR 50K | 3 | |
| VR13 | VRV0113B203 | V. RESISTOR 20K | 1 | |
| VR14 | VRV0161B202 | V. RESISTOR 2K | 1 | |
| | | | | |
| X1 | VSX0687 | CRYSTAL OSCILLATOR | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|

VEP23278A

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| ■ | VEP23278A | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | PRE PROCESS 1 | | |
| | | | | |
| | | | | |
| | | | | |
| C3001 | ECUX1H101JCV | C. CAPACITOR CH 50V 100P | 1 | |
| C3002 | ECUX1H100DCV | C. CAPACITOR CH 50V 10P | 1 | |
| C3003 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3004, 05 | ECST1CY225Z | T. CAPACITOR CH 16V 2. 2U | 2 | |
| C3006, 07 | ECST1AY106Z | T. CAPACITOR CH 10V 10U | 2 | |
| C3008, 09 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3010 | ECST1CX156Z | T. CAPACITOR CH 16V 15U | 1 | |
| C3012 | ECST1CX156Z | T. CAPACITOR CH 16V 15U | 1 | |
| C3014 | ECUX1H100DCV | C. CAPACITOR CH 50V 10P | 1 | |
| C3015 | ECUX1H560JCV | C. CAPACITOR CH 50V 56P | 1 | |
| C3016, 17 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3018 | ECUX1H050CCV | C. CAPACITOR CH 50V 5P | 1 | |
| C3019-22 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 4 | |
| C3023 | ECUX1H040CCV | C. CAPACITOR CH 50V 4P | 1 | |
| C3025 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3026, 27 | ECST1CY225Z | T. CAPACITOR CH 16V 2. 2U | 2 | |
| C3028 | ECEV1CN100Q | E. CAPACITOR CH 16V 10U | 1 | |
| C3029, 30 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3031 | ECST1EC106Z | T. CAPACITOR CH 25V 10U | 1 | |
| C3032 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3033 | ECUX1H330JCV | C. CAPACITOR CH 50V 33P | 1 | |
| C3034-38 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 5 | |
| C3040, 41 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 2 | |
| C3042 | ECEV0JN220Q | E. CAPACITOR CH6. 3V 22U | 1 | |
| C3043 | ECST1CX156Z | T. CAPACITOR CH 16V 15U | 1 | |
| C3044 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3045 | ECST1CX156Z | T. CAPACITOR CH 16V 15U | 1 | |
| C3046, 47 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3048 | ECUX1H020CCV | C. CAPACITOR CH 50V 2P | 1 | |
| C3049 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3051-53 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C3054 | ECUX1H220JCV | C. CAPACITOR CH 50V 22P | 1 | |
| C3055 | ECUX1H270JCV | C. CAPACITOR CH 50V 27P | 1 | |
| C3056 | ECCF1H680JC5 | C. CAPACITOR 50V 68P | 1 | |
| C3201 | ECUX1H101JCV | C. CAPACITOR CH 50V 100P | 1 | |
| C3202 | ECUX1H100DCV | C. CAPACITOR CH 50V 10P | 1 | |
| C3203 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3204, 05 | ECST1CY225Z | T. CAPACITOR CH 16V 2. 2U | 2 | |
| C3206, 07 | ECST1AY106Z | T. CAPACITOR CH 10V 10U | 2 | |
| C3208, 09 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3210 | ECST1CX156Z | T. CAPACITOR CH 16V 15U | 1 | |
| C3212 | ECST1CX156Z | T. CAPACITOR CH 16V 15U | 1 | |
| C3214 | ECUX1H100DCV | C. CAPACITOR CH 50V 10P | 1 | |
| C3215 | ECUX1H560JCV | C. CAPACITOR CH 50V 56P | 1 | |
| C3216, 17 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3218 | ECUX1H050CCV | C. CAPACITOR CH 50V 5P | 1 | |
| C3219-22 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 4 | |
| C3223 | ECUX1H040CCV | C. CAPACITOR CH 50V 4P | 1 | |
| C3225 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3226, 27 | ECST1CY225Z | T. CAPACITOR CH 16V 2. 2U | 2 | |
| C3228 | ECEV1CN100Q | E. CAPACITOR CH 16V 10U | 1 | |
| C3229, 30 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3231 | ECST1EC106Z | T. CAPACITOR CH 25V 10U | 1 | |
| C3232 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3233 | ECUX1H330JCV | C. CAPACITOR CH 50V 33P | 1 | |
| C3234-38 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 5 | |
| C3240, 41 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 2 | |
| C3242 | ECEV0JN220Q | E. CAPACITOR CH6. 3V 22U | 1 | |
| C3243 | ECST1CX156Z | T. CAPACITOR CH 16V 15U | 1 | |
| C3244 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3245 | ECST1CX156Z | T. CAPACITOR CH 16V 15U | 1 | |
| C3246, 47 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3248 | ECUX1H020CCV | C. CAPACITOR CH 50V 2P | 1 | |
| C3249 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3251-53 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C3254 | ECUX1H220JCV | C. CAPACITOR CH 50V 22P | 1 | |
| C3255 | ECUX1H270JCV | C. CAPACITOR CH 50V 27P | 1 | |
| C3256 | ECCF1H680JC5 | C. CAPACITOR 50V 68P | 1 | |
| C3401 | ECUX1H101JCV | C. CAPACITOR CH 50V 100P | 1 | |
| | | | | |
| | | | | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| C3402 | ECUX1H100DCV | C. CAPACITOR CH 50V 10P | 1 | |
| C3403 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3404, 05 | ECST1CY225Z | T. CAPACITOR CH 16V 2. 2U | 2 | |
| C3406, 07 | ECST1AY106Z | T. CAPACITOR CH 10V 10U | 2 | |
| C3408, 09 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3410 | ECST1CX156Z | T. CAPACITOR CH 16V 15U | 1 | |
| C3412 | ECST1CX156Z | T. CAPACITOR CH 16V 15U | 1 | |
| C3414 | ECUX1H100DCV | C. CAPACITOR CH 50V 10P | 1 | |
| C3415 | ECUX1H560JCV | C. CAPACITOR CH 50V 56P | 1 | |
| C3416, 17 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3418 | ECUX1H050CCV | C. CAPACITOR CH 50V 5P | 1 | |
| C3419-22 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 4 | |
| C3423 | ECUX1H040CCV | C. CAPACITOR CH 50V 4P | 1 | |
| C3425 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3426, 27 | ECST1CY225Z | T. CAPACITOR CH 16V 2. 2U | 2 | |
| C3428 | ECEV1CN100Q | E. CAPACITOR CH 16V 10U | 1 | |
| C3429, 30 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3431 | ECST1EC106Z | T. CAPACITOR CH 25V 10U | 1 | |
| C3432 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3433 | ECUX1H330JCV | C. CAPACITOR CH 50V 33P | 1 | |
| C3434-38 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 5 | |
| C3440, 41 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 2 | |
| C3442 | ECEV0JN220Q | E. CAPACITOR CH6. 3V 22U | 1 | |
| C3443 | ECST1CX156Z | T. CAPACITOR CH 16V 15U | 1 | |
| C3444 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3445 | ECST1CX156Z | T. CAPACITOR CH 16V 15U | 1 | |
| C3446, 47 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3448 | ECUX1H020CCV | C. CAPACITOR CH 50V 2P | 1 | |
| C3449 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3451-53 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C3454 | ECUX1H220JCV | C. CAPACITOR CH 50V 22P | 1 | |
| C3455 | ECUX1H270JCV | C. CAPACITOR CH 50V 27P | 1 | |
| C3456 | ECCF1H680JC5 | C. CAPACITOR 50V 68P | 1 | |
| C3601 | ECST1VY104Z | T. CAPACITOR CH 35V 0. 1U | 1 | |
| C3602 | ECEV0GV101Q | E. CAPACITOR CH 4V 100U | 1 | |
| C3603, 04 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3607-14 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 8 | |
| C3615-19 | ECST1VY104Z | T. CAPACITOR CH 35V 0. 1U | 5 | |
| C3620, 21 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3622 | ECST1ED226Z | T. CAPACITOR CH 25V 22U | 1 | |
| C3623 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3624 | ECST1CC336Z | T. CAPACITOR CH 16V 33U | 1 | |
| C3625 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3626 | ECST1CC336Z | T. CAPACITOR CH 16V 33U | 1 | |
| C3627 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3628 | ECEV1EN4R7Q | E. CAPACITOR CH 25V 4. 7U | 1 | |
| C3633, 34 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3635 | ECST1AX226Z | T. CAPACITOR CH 10V 22U | 1 | |
| C3636, 37 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3638 | ECST1AX226Z | T. CAPACITOR CH 10V 22U | 1 | |
| C3639 | ECCF1H470JC4 | C. CAPACITOR 50V 47P | 1 | |
| | | | | |
| D3001-03 | MA142K | DIODE | 3 | |
| D3201-03 | MA142K | DIODE | 3 | |
| D3401-03 | MA142K | DIODE | 3 | |
| D3601 | MA142K | DIODE | 1 | |
| D3602-04 | MA8024 | DIODE | 3 | |
| | | | | |
| FL3001 | VLF1302 | FILTER | 1 | |
| FL3002 | VLF1303 | FILTER | 1 | |
| FL3201 | VLF1302 | FILTER | 1 | |
| FL3202 | VLF1303 | FILTER | 1 | |
| FL3401 | VLF1302 | FILTER | 1 | |
| FL3402 | VLF1303 | FILTER | 1 | |
| | | | | |
| IC3001 | TC4W53FU | IC | 1 | |
| IC3002 | NJM062M | IC | 1 | |
| IC3003 | MC1495M | IC | 1 | |
| IC3004 | NJM062M | IC | 1 | |
| IC3005 | TC4W53FU | IC | 1 | |
| IC3006 | AN90B60S | IC | 1 | |
| IC3201 | TC4W53FU | IC | 1 | |
| IC3202 | NJM062M | IC | 1 | |
| IC3203 | MC1495M | IC | 1 | |
| IC3204 | NJM062M | IC | 1 | |
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VEP23278A

| Ref.No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| IC3205 | TC4W53FU | IC | 1 | |
| IC3206 | AN90B60S | IC | 1 | |
| IC3401 | TC4W53FU | IC | 1 | |
| IC3402 | NJM062M | IC | 1 | |
| IC3403 | MC1495M | IC | 1 | |
| IC3404 | NJM062M | IC | 1 | |
| IC3405 | TC4W53FU | IC | 1 | |
| IC3406 | AN90B60S | IC | 1 | |
| IC3601 | NJM062M | IC | 1 | |
| IC3603 | NJM064M | IC | 1 | |
| IC3604,05 | NJM2904M | IC | 2 | |
| IC3606 | NJM431U | IC | 1 | |
| IC3607 | MC74HC4053F | IC | 1 | |
| IC3608 | XC62AP3002M | IC | 1 | |
| IC3609 | XC62DN3002M | IC | 1 | |
| | | | | |
| P1,P2 | VJP3125B006 | CONNECTOR (MALE) 6P | 2 | |
| P3 | VJS3791B045 | CONNECTOR (FEMALE) | 1 | |
| | | | | |
| Q3001 | XP6401 | TRANSISTOR | 1 | |
| Q3003 | 2SD1819A | TRANSISTOR | 1 | |
| Q3004 | XP6534 | TRANSISTOR | 1 | |
| Q3006 | 2SA1532-B | TRANSISTOR | 1 | |
| Q3007 | 2SC3930-B | TRANSISTOR | 1 | |
| Q3008-10 | 2SK662-R | TRANSISTOR | 3 | |
| Q3011 | 2SK508-B | TRANSISTOR | 1 | |
| Q3012,13 | 2SK662-R | TRANSISTOR | 2 | |
| Q3014,15 | 2SK508-B | TRANSISTOR | 2 | |
| Q3016 | XP6435 | TRANSISTOR-RESISTOR | 1 | |
| Q3018 | 2SB1218A | TRANSISTOR | 1 | |
| Q3019 | XP1501 | TRANSISTOR | 1 | |
| Q3021 | 2SK662-R | TRANSISTOR | 1 | |
| Q3022 | XP1501 | TRANSISTOR | 1 | |
| Q3023 | 2SD1819A | TRANSISTOR | 1 | |
| Q3024 | 2SK662-R | TRANSISTOR | 1 | |
| Q3025 | XP1501 | TRANSISTOR | 1 | |
| Q3027 | 2SD1819A | TRANSISTOR | 1 | |
| Q3028 | 2SC3930-B | TRANSISTOR | 1 | |
| Q3029 | 2SK662-R | TRANSISTOR | 1 | |
| Q3201 | XP6401 | TRANSISTOR | 1 | |
| Q3203 | 2SD1819A | TRANSISTOR | 1 | |
| Q3204 | XP6534 | TRANSISTOR-RESISTOR | 1 | |
| Q3206 | 2SA1532-B | TRANSISTOR | 1 | |
| Q3207 | 2SC3930-B | TRANSISTOR | 1 | |
| Q3208-10 | 2SK662-R | TRANSISTOR | 3 | |
| Q3211 | 2SK508-B | TRANSISTOR | 1 | |
| Q3212,13 | 2SK662-R | TRANSISTOR | 2 | |
| Q3214,15 | 2SK508-B | TRANSISTOR | 2 | |
| Q3216 | XP6435 | TRANSISTOR-RESISTOR | 1 | |
| Q3218 | 2SB1218A | TRANSISTOR | 1 | |
| Q3219 | XP1501 | TRANSISTOR | 1 | |
| Q3221 | 2SK662-R | TRANSISTOR | 1 | |
| Q3222 | XP1501 | TRANSISTOR | 1 | |
| Q3223 | 2SD1819A | TRANSISTOR | 1 | |
| Q3224 | 2SK662-R | TRANSISTOR | 1 | |
| Q3225 | XP1501 | TRANSISTOR | 1 | |
| Q3227 | 2SD1819A | TRANSISTOR | 1 | |
| Q3228 | 2SC3930-B | TRANSISTOR | 1 | |
| Q3229 | 2SK662-R | TRANSISTOR | 1 | |
| Q3401 | XP6401 | TRANSISTOR | 1 | |
| Q3403 | 2SD1819A | TRANSISTOR | 1 | |
| Q3404 | XP6534 | TRANSISTOR-RESISTOR | 1 | |
| Q3406 | 2SA1532-B | TRANSISTOR | 1 | |
| Q3407 | 2SC3930-B | TRANSISTOR | 1 | |
| Q3408-10 | 2SK662-R | TRANSISTOR | 3 | |
| Q3411 | 2SK508-B | TRANSISTOR | 1 | |
| Q3412,13 | 2SK662-R | TRANSISTOR | 2 | |
| Q3414,15 | 2SK508-B | TRANSISTOR | 2 | |
| Q3416 | XP6435 | TRANSISTOR-RESISTOR | 1 | |
| Q3418 | 2SB1218A | TRANSISTOR | 1 | |
| Q3419 | XP1501 | TRANSISTOR | 1 | |
| Q3421 | 2SK662-R | TRANSISTOR | 1 | |
| Q3422 | XP1501 | TRANSISTOR | 1 | |
| Q3423 | 2SD1819A | TRANSISTOR | 1 | |
| Q3424 | 2SK662-R | TRANSISTOR | 1 | |
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| | | | | |

| Ref.No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| Q3425 | XP1501 | TRANSISTOR | 1 | |
| Q3427 | 2SD1819A | TRANSISTOR | 1 | |
| Q3428 | 2SC3930-B | TRANSISTOR | 1 | |
| Q3429 | 2SK662-R | TRANSISTOR | 1 | |
| Q3601,02 | 2SD1819A | TRANSISTOR | 2 | |
| Q3603,04 | 2SB956-R | TRANSISTOR | 2 | |
| Q3605 | 2SD1280-R | TRANSISTOR | 1 | |
| | | | | |
| R3001 | ERJ3GEYG332 | M.RESISTOR CH 1/16W 3.3K | 1 | |
| R3002,03 | VRE0071E331 | M.RESISTOR CH 1/10W 330 | 2 | |
| R3004 | ERJ3GEYJ392 | M.RESISTOR CH 1/16W 3.9K | 1 | |
| R3005,06 | VRE0071E331 | M.RESISTOR CH 1/10W 330 | 2 | |
| R3007 | ERJ3GEYJ392 | M.RESISTOR CH 1/16W 3.9K | 1 | |
| R3008 | ERJ3GEYJ272 | M.RESISTOR CH 1/16W 2.7K | 1 | |
| R3009 | VRE0071E151 | M.RESISTOR CH 1/10W 150 | 1 | |
| R3010 | VRE0071E563 | M.RESISTOR CH 1/16W 56K | 1 | |
| R3011 | ERJ3GEYJ222 | M.RESISTOR CH 1/16W 2.2K | 1 | |
| R3012 | VRE0071E362 | M.RESISTOR CH 1/10W 3.6K | 1 | |
| R3013 | VRE0071E223 | M.RESISTOR CH 1/16W 22K | 1 | |
| R3014 | VRE0071E683 | M.RESISTOR CH 1/10W 68K | 1 | |
| R3015 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 1 | |
| R3016 | ERJ3GEYG332 | M.RESISTOR CH 1/16W 3.3K | 1 | |
| R3017 | VRE0071E222 | M.RESISTOR CH 1/16W 2.2K | 1 | |
| R3018 | VRE0071E102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R3019 | VRE0071E471 | M.RESISTOR CH 1/10W 470 | 1 | |
| R3020 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R3021 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R3022 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R3023 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3024 | VRE0071E222 | M.RESISTOR CH 1/16W 2.2K | 1 | |
| R3025 | VRE0071E561 | M.RESISTOR CH 1/16W 560 | 1 | |
| R3026 | VRE0071E102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R3027 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R3028 | VRE0071E122 | M.RESISTOR CH 1/10W 1.2K | 1 | |
| R3029 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R3030 | VRE0071E332 | M.RESISTOR CH1/16W 3.3K | 1 | |
| R3031 | VRE0071E432 | M.RESISTOR CH 1/10W 4.3K | 1 | |
| R3032,33 | VRE0071E183 | M.RESISTOR CH 1/10W 18K | 2 | |
| R3034 | VRE0071E272 | M.RESISTOR CH 1/10W 2.7K | 1 | |
| R3035 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3036 | VRE0071E362 | M.RESISTOR CH 1/10W 3.6K | 1 | |
| R3037 | ERJ3GEYJ105 | M.RESISTOR CH 1/16W 1M | 1 | |
| R3038 | VRE0071E334 | M.RESISTOR CH 1/10W 330K | 1 | |
| R3039 | VRE0071E332 | M.RESISTOR CH1/16W 3.3K | 1 | |
| R3040 | VRE0071E152 | M.RESISTOR CH 1/10W 1.5K | 1 | |
| R3041 | VRE0071E561 | M.RESISTOR CH 1/16W 560 | 1 | |
| R3042 | VRE0071E181 | M.RESISTOR CH 1/10W 180 | 1 | |
| R3043 | EXB24V224JX | RESISTOR-RESISTOR | 1 | |
| R3045 | EXB24V224JX | RESISTOR-RESISTOR | 1 | |
| R3047 | VRE0071E472 | M.RESISTOR CH 1/10W 4.7K | 1 | |
| R3048 | VRE0071E242 | M.RESISTOR CH 1/10W 2.4K | 1 | |
| R3049,50 | VRE0071E272 | M.RESISTOR CH 1/10W 2.7K | 2 | |
| R3051 | VRE0071E682 | M.RESISTOR CH1/16W 6.8K | 1 | |
| R3052 | ERJ3GEYG152 | M.RESISTOR CH 1/16W 1.5K | 1 | |
| R3053 | VRE0071E103 | M.RESISTOR CH 1/10W 10K | 1 | |
| R3054 | VRE0071E682 | M.RESISTOR CH1/16W 6.8K | 1 | |
| R3055 | ERJ3GEYJ122 | M.RESISTOR CH 1/16W 1.2K | 1 | |
| R3056,57 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 2 | |
| R3058,59 | VRE0071E473 | M.RESISTOR CH1/16W 47K | 2 | |
| R3060 | ERJ3GEYJ222 | M.RESISTOR CH 1/16W 2.2K | 1 | |
| R3061 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R3062 | ERJ3GEYJ182 | M.RESISTOR CH 1/16W 1.8K | 1 | |
| R3063 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3064 | VRE0071E102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R3065 | VRE0071E333 | M.RESISTOR CH 1/16W 33K | 1 | |
| R3066 | ERJ3GEYJ394 | M.RESISTOR CH 1/16W 390K | 1 | |
| R3067,68 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 2 | |
| R3069 | VRE0071E222 | M.RESISTOR CH 1/16W 2.2K | 1 | |
| R3070 | EXB24V101J | RESISTOR-RESISTOR | 1 | |
| R3072 | EXB24V101J | RESISTOR-RESISTOR | 1 | |
| R3074 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 1 | |
| R3075 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R3076 | EXB24V103J | RESISTOR-RESISTOR | 1 | |
| R3078 | EXB24V103J | RESISTOR-RESISTOR | 1 | |
| R3080 | VRE0071E751 | M.RESISTOR CH 1/10W 750 | 1 | |
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| | | | | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R3081 | VRE0071E562 | M. RESISTOR CH 1/16W 5. 6K | 1 | |
| R3082 | VRE0071E682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R3083 | VRE0071E623 | M. RESISTOR CH 1/10W 62K | 1 | |
| R3084 | VRE0071E202 | M. RESISTOR CH 1/10W 2K | 1 | |
| R3085 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 1 | |
| R3086 | ERJ3GEYJ182 | M. RESISTOR CH 1/16W 1. 8K | 1 | |
| R3087 | VRE0071E152 | M. RESISTOR CH 1/10W 1. 5K | 1 | |
| R3088 | VRE0071E511 | M. RESISTOR CH 1/10W 510 | 1 | |
| R3089 | VRE0071E620 | M. RESISTOR CH 1/10W 62 | 1 | |
| R3090 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R3091 | VRE0071E242 | M. RESISTOR CH 1/10W 2. 4K | 1 | |
| R3092 | VRE0071E392 | M. RESISTOR CH 1/10W 3. 9K | 1 | |
| R3093 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R3094 | VRE0071E332 | M. RESISTOR CH1/16W 3. 3K | 1 | |
| R3096 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R3097 | VRE0071E152 | M. RESISTOR CH 1/10W 1. 5K | 1 | |
| R3098 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 1 | |
| R3099 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3100 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R3101 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3102 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3103 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3104 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R3105 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3107 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3109 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3111 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3112 | VRE0071E752 | M. RESISTOR CH1/16W 7. 5K | 1 | |
| R3201 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R3202. 03 | VRE0071E331 | M. RESISTOR CH 1/10W 330 | 2 | |
| R3204 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R3205. 06 | VRE0071E331 | M. RESISTOR CH 1/10W 330 | 2 | |
| R3207 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R3208 | ERJ3GEYJ272 | M. RESISTOR CH 1/16W 2. 7K | 1 | |
| R3209 | VRE0071E151 | M. RESISTOR CH 1/10W 150 | 1 | |
| R3210 | VRE0071E563 | M. RESISTOR CH 1/16W 56K | 1 | |
| R3211 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R3212 | VRE0071E362 | M. RESISTOR CH 1/10W 3. 6K | 1 | |
| R3213 | VRE0071E223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R3214 | VRE0071E683 | M. RESISTOR CH 1/10W 68K | 1 | |
| R3215 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R3216 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R3217 | VRE0071E222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R3218 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3219 | VRE0071E471 | M. RESISTOR CH 1/10W 470 | 1 | |
| R3220 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R3221 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R3222 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3223 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3224 | VRE0071E222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R3225 | VRE0071E561 | M. RESISTOR CH 1/16W 560 | 1 | |
| R3226 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3227 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R3228 | VRE0071E122 | M. RESISTOR CH 1/10W 1. 2K | 1 | |
| R3229 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R3230 | VRE0071E332 | M. RESISTOR CH1/16W 3. 3K | 1 | |
| R3231 | VRE0071E432 | M. RESISTOR CH 1/10W 4. 3K | 1 | |
| R3232 | VRE0071E333 | M. RESISTOR CH 1/16W 33K | 1 | |
| R3233 | VRE0071E472 | M. RESISTOR CH 1/10W 4. 7K | 1 | |
| R3234 | VRE0071E272 | M. RESISTOR CH 1/10W 2. 7K | 1 | |
| R3235 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3236 | VRE0071E362 | M. RESISTOR CH 1/10W 3. 6K | 1 | |
| R3237 | ERJ3GEYJ105 | M. RESISTOR CH 1/16W 1M | 1 | |
| R3238 | VRE0071E334 | M. RESISTOR CH 1/10W 330K | 1 | |
| R3239 | VRE0071E332 | M. RESISTOR CH1/16W 3. 3K | 1 | |
| R3240 | VRE0071E152 | M. RESISTOR CH 1/10W 1. 5K | 1 | |
| R3241 | VRE0071E561 | M. RESISTOR CH 1/16W 560 | 1 | |
| R3242 | VRE0071E181 | M. RESISTOR CH 1/10W 180 | 1 | |
| R3243 | EXB24V224JX | RESISTOR-RESISTOR | 1 | |
| R3245 | EXB24V224JX | RESISTOR-RESISTOR | 1 | |
| R3247 | VRE0071E472 | M. RESISTOR CH 1/10W 4. 7K | 1 | |
| R3248 | VRE0071E242 | M. RESISTOR CH 1/10W 2. 4K | 1 | |
| R3249. 50 | VRE0071E272 | M. RESISTOR CH 1/10W 2. 7K | 2 | |
| R3251 | VRE0071E682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R3252 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 1 | |
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| | | | | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R3253 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 1 | |
| R3254 | VRE0071E682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R3255 | ERJ3GEYJ122 | M. RESISTOR CH 1/16W 1. 2K | 1 | |
| R3256, 57 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 2 | |
| R3258. 59 | VRE0071E473 | M. RESISTOR CH1/16W 47K | 2 | |
| R3260 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R3261 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R3262 | ERJ3GEYJ182 | M. RESISTOR CH 1/16W 1. 8K | 1 | |
| R3263 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3264 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3265 | VRE0071E473 | M. RESISTOR CH1/16W 47K | 1 | |
| R3266 | ERJ3GEYJ394 | M. RESISTOR CH 1/16W 390K | 1 | |
| R3267. 68 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R3269 | VRE0071E222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R3270 | EXB24V101J | RESISTOR-RESISTOR | 1 | |
| R3272 | EXB24V101J | RESISTOR-RESISTOR | 1 | |
| R3274 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R3275 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R3276 | EXB24V103J | RESISTOR-RESISTOR | 1 | |
| R3278 | EXB24V103J | RESISTOR-RESISTOR | 1 | |
| R3280 | VRE0071E751 | M. RESISTOR CH 1/10W 750 | 1 | |
| R3281 | VRE0071E562 | M. RESISTOR CH 1/16W 5. 6K | 1 | |
| R3282 | VRE0071E682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R3283 | VRE0071E623 | M. RESISTOR CH 1/10W 62K | 1 | |
| R3284 | VRE0071E202 | M. RESISTOR CH 1/10W 2K | 1 | |
| R3285 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 1 | |
| R3286 | ERJ3GEYJ182 | M. RESISTOR CH 1/16W 1. 8K | 1 | |
| R3287 | VRE0071E152 | M. RESISTOR CH 1/10W 1. 5K | 1 | |
| R3288 | VRE0071E511 | M. RESISTOR CH 1/10W 510 | 1 | |
| R3289 | VRE0071E620 | M. RESISTOR CH 1/10W 62 | 1 | |
| R3290 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R3291 | VRE0071E242 | M. RESISTOR CH 1/10W 2. 4K | 1 | |
| R3292 | VRE0071E392 | M. RESISTOR CH 1/10W 3. 9K | 1 | |
| R3293 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R3294 | VRE0071E332 | M. RESISTOR CH1/16W 3. 3K | 1 | |
| R3296 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R3297 | VRE0071E152 | M. RESISTOR CH 1/10W 1. 5K | 1 | |
| R3298 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 1 | |
| R3299 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3300 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R3301 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3302 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3303 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3304 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R3305-07 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 3 | |
| R3309 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3311 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3312 | VRE0071E752 | M. RESISTOR CH1/16W 7. 5K | 1 | |
| R3313 | ERDS2TJ224 | C. RESISTOR 1/4W 220K | 1 | |
| R3401 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R3402. 03 | VRE0071E331 | M. RESISTOR CH 1/10W 330 | 2 | |
| R3404 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R3405. 06 | VRE0071E331 | M. RESISTOR CH 1/10W 330 | 2 | |
| R3407 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R3408 | ERJ3GEYJ272 | M. RESISTOR CH 1/16W 2. 7K | 1 | |
| R3409 | VRE0071E151 | M. RESISTOR CH 1/10W 150 | 1 | |
| R3410 | VRE0071E563 | M. RESISTOR CH 1/16W 56K | 1 | |
| R3411 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R3412 | VRE0071E362 | M. RESISTOR CH 1/10W 3. 6K | 1 | |
| R3413 | VRE0071E223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R3414 | VRE0071E683 | M. RESISTOR CH 1/10W 68K | 1 | |
| R3415 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R3416 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R3417 | VRE0071E222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R3418 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3419 | VRE0071E471 | M. RESISTOR CH 1/10W 470 | 1 | |
| R3420 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R3421 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R3422 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3423 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3424 | VRE0071E222 | M. RESISTOR CH 1/16W 5. 5K | 1 | |
| R3425 | VRE0071E561 | M. RESISTOR CH 1/16W 560 | 1 | |
| R3426 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3427 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R3428 | VRE0071E122 | M. RESISTOR CH 1/10W 1. 2K | 1 | |
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| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R3429 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R3430 | VRE0071E332 | M.RESISTOR CH1/16W 3.3K | 1 | |
| R3431 | VRE0071E432 | M.RESISTOR CH 1/10W 4.3K | 1 | |
| R3432,33 | VRE0071E183 | M.RESISTOR CH 1/10W 18K | 2 | |
| R3434 | VRE0071E272 | M.RESISTOR CH 1/10W 2.7K | 1 | |
| R3435 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3436 | VRE0071E362 | M.RESISTOR CH 1/10W 3.6K | 1 | |
| R3437 | ERJ3GEYJ105 | M.RESISTOR CH 1/16W 1M | 1 | |
| R3438 | VRE0071E334 | M.RESISTOR CH 1/10W 330K | 1 | |
| R3439 | VRE0071E332 | M.RESISTOR CH1/16W 3.3K | 1 | |
| R3440 | VRE0071E152 | M.RESISTOR CH 1/10W 1.5K | 1 | |
| R3441 | VRE0071E561 | M.RESISTOR CH 1/16W 560 | 1 | |
| R3442 | VRE0071E181 | M.RESISTOR CH 1/10W 180 | 1 | |
| R3443 | EXB24V224JX | RESISTOR-RESISTOR | 1 | |
| R3445 | EXB24V224JX | RESISTOR-RESISTOR | 1 | |
| R3447 | VRE0071E472 | M.RESISTOR CH 1/10W 4.7K | 1 | |
| R3448 | VRE0071E242 | M.RESISTOR CH 1/10W 2.4K | 1 | |
| R3449,50 | VRE0071E272 | M.RESISTOR CH 1/10W 2.7K | 2 | |
| R3451 | VRE0071E682 | M.RESISTOR CH1/16W 6.8K | 1 | |
| R3452 | ERJ3GEYG152 | M.RESISTOR CH 1/16W 1.5K | 1 | |
| R3453 | VRE0071E103 | M.RESISTOR CH 1/10W 10K | 1 | |
| R3454 | VRE0071E682 | M.RESISTOR CH1/16W 6.8K | 1 | |
| R3455 | ERJ3GEYJ122 | M.RESISTOR CH 1/16W 1.2K | 1 | |
| R3456,57 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 2 | |
| R3458,59 | VRE0071E473 | M.RESISTOR CH1/16W 47K | 2 | |
| R3460 | ERJ3GEYJ222 | M.RESISTOR CH 1/16W 2.2K | 1 | |
| R3461 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R3462 | ERJ3GEYJ182 | M.RESISTOR CH 1/16W 1.8K | 1 | |
| R3463 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3464 | VRE0071E102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R3465 | VRE0071E333 | M.RESISTOR CH 1/16W 33K | 1 | |
| R3466 | ERJ3GEYJ394 | M.RESISTOR CH 1/16W 390K | 1 | |
| R3467,68 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 2 | |
| R3469 | VRE0071E222 | M.RESISTOR CH 1/16W 2.2K | 1 | |
| R3470 | EXB24V101J | RESISTOR-RESISTOR | 1 | |
| R3472 | EXB24V101J | RESISTOR-RESISTOR | 1 | |
| R3474 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 1 | |
| R3475 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R3476 | EXB24V103J | RESISTOR-RESISTOR | 1 | |
| R3478 | EXB24V103J | RESISTOR-RESISTOR | 1 | |
| R3480 | VRE0071E751 | M.RESISTOR CH 1/10W 750 | 1 | |
| R3481 | VRE0071E562 | M.RESISTOR CH 1/16W 5.6K | 1 | |
| R3482 | VRE0071E682 | M.RESISTOR CH1/16W 6.8K | 1 | |
| R3483 | VRE0071E623 | M.RESISTOR CH 1/10W 62K | 1 | |
| R3484 | VRE0071E202 | M.RESISTOR CH 1/10W 2K | 1 | |
| R3485 | VRE0071E103 | M.RESISTOR CH 1/10W 10K | 1 | |
| R3486 | ERJ3GEYJ182 | M.RESISTOR CH 1/16W 1.8K | 1 | |
| R3487 | VRE0071E152 | M.RESISTOR CH 1/10W 1.5K | 1 | |
| R3488 | VRE0071E511 | M.RESISTOR CH 1/10W 510 | 1 | |
| R3489 | VRE0071E620 | M.RESISTOR CH 1/10W 62 | 1 | |
| R3490 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R3491 | VRE0071E242 | M.RESISTOR CH 1/10W 2.4K | 1 | |
| R3492 | VRE0071E392 | M.RESISTOR CH 1/10W 3.9K | 1 | |
| R3493 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 1 | |
| R3494 | VRE0071E332 | M.RESISTOR CH1/16W 3.3K | 1 | |
| R3496 | ERJ3GEYG332 | M.RESISTOR CH 1/16W 3.3K | 1 | |
| R3497 | VRE0071E152 | M.RESISTOR CH 1/10W 1.5K | 1 | |
| R3498 | VRE0071E103 | M.RESISTOR CH 1/10W 10K | 1 | |
| R3499 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R3500 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R3501 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R3502 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3503 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R3504 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R3505 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3507 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3509 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3511 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3512 | VRE0071E752 | M.RESISTOR CH1/16W 7.5K | 1 | |
| R3513 | ERDS2TJ224 | C.RESISTOR 1/4W 220K | 1 | |
| R3601 | VRE0071E822 | M.RESISTOR CH 1/10W 8.2K | 1 | |
| R3602 | VRE0071E333 | M.RESISTOR CH 1/16W 33K | 1 | |
| R3603 | ERJ3GEYJ151 | M.RESISTOR CH 1/16W 150 | 1 | |
| R3604-07 | ERJ3GEYJ183 | M.RESISTOR CH 1/16W 18K | 4 | |
| R3608 | ERJ3GEYJ273 | M.RESISTOR CH 1/16W 27K | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R3609-12 | ERJ3GEYJ123 | M.RESISTOR CH 1/16W 12K | 4 | |
| R3613 | ERJ3GEYJ393 | M.RESISTOR CH 1/16W 39K | 1 | |
| R3617 | ERJ3GEYJ562 | M.RESISTOR CH 1/16W 5.6K | 1 | |
| R3618 | ERJ3GEYJ821 | M.RESISTOR CH 1/16W 820 | 1 | |
| R3619 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R3621 | VRE0071E151 | M.RESISTOR CH 1/10W 150 | 1 | |
| R3622 | VRE0071E331 | M.RESISTOR CH 1/10W 330 | 1 | |
| R3623 | VRE0071E200 | M.RESISTOR CH 1/16W 20 | 1 | |
| R3624,25 | VRE0071E301 | M.RESISTOR CH 1/10W 300 | 2 | |
| R3626 | VRE0071E102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R3627 | VRE0071E822 | M.RESISTOR CH 1/10W 8.2K | 1 | |
| R3628 | ERJ3GEYJ333 | M.RESISTOR CH 1/16W 33K | 1 | |
| R3629 | ERJ3GEYJ272 | M.RESISTOR CH 1/16W 2.7K | 1 | |
| R3630 | ERJ3GEYJ153 | M.RESISTOR CH 1/16W 15K | 1 | |
| R3631 | VRE0071E393 | M.RESISTOR CH 1/16W 39K | 1 | |
| R3632 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3633 | VRE0071E183 | M.RESISTOR CH 1/10W 18K | 1 | |
| R3634 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R3635 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 1 | |
| R3636 | ERJ3GEYJ153 | M.RESISTOR CH 1/16W 15K | 1 | |
| R3637,38 | VRE0071E393 | M.RESISTOR CH 1/16W 39K | 2 | |
| R3639 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R3640 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3641 | VRE0071E153 | M.RESISTOR CH 1/16W 15K | 1 | |
| R3642 | VRE0071E303 | M.RESISTOR CH 1/10W 30K | 1 | |
| R3643 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R3644 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3645 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R3646 | EXB24V103J | RESISTOR-RESISTOR | 1 | |
| R3647 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R3648 | VRE0071E913 | M.RESISTOR CH 1/10W 91K | 1 | |
| R3649 | VRE0071E122 | M.RESISTOR CH 1/10W 1.2K | 1 | |
| R3650 | ERJ3GEYJ562 | M.RESISTOR CH 1/16W 5.6K | 1 | |
| R3651 | ERJ3GEYJ105 | M.RESISTOR CH 1/16W 1M | 1 | |
| R3652 | ERJ3GEYJ224 | M.RESISTOR CH 1/16W 220K | 1 | |
| R3653-56 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 4 | |
| R3657 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R3658 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3660 | ERDS2TJ392 | C.RESISTOR 1/4W 3.9K | 1 | |
| R3661,62 | ERDS2TJ101 | C.RESISTOR 1/4W 100 | 2 | |
| | | | | |
| TG3001 | EYF6CU | TEST POINT | 1 | |
| | | | | |
| VR3001 | VRV0113B503 | V.RESISTOR 50K | 1 | |
| VR3002 | VRV0113B202 | V.RESISTOR 2K | 1 | |
| VR3003 | VRV0113B203 | V.RESISTOR 20K | 1 | |
| VR3004 | VRV0113B104 | V.RESISTOR 100K | 1 | |
| VR3201 | VRV0113B503 | V.RESISTOR 50K | 1 | |
| VR3202 | VRV0113B202 | V.RESISTOR 2K | 1 | |
| VR3204 | VRV0113B104 | V.RESISTOR 100K | 1 | |
| VR3401 | VRV0113B503 | V.RESISTOR 50K | 1 | |
| VR3402 | VRV0113B202 | V.RESISTOR 2K | 1 | |
| VR3403 | VRV0113B203 | V.RESISTOR 20K | 1 | |
| VR3404 | VRV0113B104 | V.RESISTOR 100K | 1 | |

## VEP00W29A / VEP00Y28A

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| ■ | VEP00W29A | P.C.BOARD W/COMPONENT | 1 | (RTL) |
| | | CAMERA FLEX | | |
| ■ | VEP00Y28A | P.C.BOARD W/COMPONENT | 1 | (RTL) |
| | | MOTHER | | |
| C6901-12 | ECUX1H102JCV | C.CAPACITOR CH 50V 1000P | 12 | |
| C6914,15 | ECUX1H102JCV | C.CAPACITOR CH 50V 1000P | 2 | |
| L6901-28 | VLF1315A102 | FILTER | 28 | |
| L6929-31 | VLP0147 | COIL | 3 | |
| L6932-37 | VLF1315A102 | FILTER | 6 | |
| L6938 | VLP0147 | COIL | 1 | |
| P9601 | VJP3808A100 | CONNECTOR (MALE) | 1 | |
| P9602-06 | VJS3657 | CONNECTOR (FEMALE) | 5 | |
| P9607 | VJP3125B006 | CONNECTOR (MALE) 6P | 1 | |
| P9608 | VJP3125B010 | CONNECTOR (MALE) | 1 | |
| P9610 | VJP3125B014 | CONNECTOR (MALE) | 1 | |
| P9611 | VJP3125B010 | CONNECTOR (MALE) | 1 | |
| P9612 | VJP3518B002 | CONNECTOR (MALE) | 1 | |
| P9613 | VJP3125B005 | CONNECTOR (MALE) 5P | 1 | |
| P9614 | VJP3808E140 | CONNECTOR (MALE) | 1 | |
| P9617 | VJP3125B012 | CONNECTOR (MALE) | 1 | |
| P9619 | VJS3791B045 | CONNECTOR (FEMALE) | 1 | |
| P9620 | VJP3125B006 | CONNECTOR (MALE) 6P | 1 | |
| P9621 | VJP3125B004 | CONNECTOR (MALE) | 1 | |
| P9622 | VJP3125B003 | CONNECTOR (MALE) 3P | 1 | |
| R9603 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R9605-08 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 4 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|

VEP26074C

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| ■ | VEP26074C | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | CAMERA SYSCON | | |
| | | | | |
| | | | | |
| | | | | |
| C3500 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3502, 03 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3504 | ECEV1HN010Q | E. CAPACITOR CH 50V 1U | 1 | |
| C3505, 06 | ECUX1H330JCV | C. CAPACITOR CH 50V 33P | 2 | |
| C3507 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3509 | ECEV1HV0R1Q | E. CAPACITOR CH 50V 0. 1U | 1 | |
| C3511 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3512 | ECST1VY224Z | T. CAPACITOR CH 35V 0. 22U | 1 | |
| C3513 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3514 | ECST1VY224Z | T. CAPACITOR CH 35V 0. 22U | 1 | |
| C3515-19 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 5 | |
| C3520 | ECEV0JV101Q | E. CAPACITOR CH6. 3V 100U | 1 | |
| C3521 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3523-28 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 6 | |
| C3531 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3533 | ECUX1H151JCV | C. CAPACITOR CH 50V 150P | 1 | |
| C3534 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3535 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C3536-40 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 5 | |
| C3558-60 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C3561 | ECEV1CV220Q | E. CAPACITOR CH 16V 22U | 1 | |
| C3562 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3564 | ECEV1EN3R3Q | E. CAPACITOR CH 25V 3. 3U | 1 | |
| C3565, 66 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3567, 68 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 2 | |
| C3571-76 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 6 | |
| C3577-79 | ECST1VY224Z | T. CAPACITOR CH 35V 0. 22U | 3 | |
| C3580-82 | ECEV0JN100Q | E. CAPACITOR CH6. 3V 10U | 3 | |
| C3583-88 | ECST1VY474Z | T. CAPACITOR CH 35V 0. 47U | 6 | |
| C3593-95 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C3596-98 | ECEV1CV100Q | E. CAPACITOR CH 16V 10U | 3 | |
| C3599 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3610 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3701-03 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| | | | | |
| D3500, 01 | MA142K | DIODE | 2 | |
| | | | | |
| IC3501 | MN18885 | IC | 1 | |
| IC3502 | VSI2241A | IC | 1 | |
| IC3503 | K6256CLG7L | IC | 1 | |
| IC3504 | STK12C68S45 | IC | 1 | |
| IC3505 | VSI2242A | IC | 1 | |
| IC3506 | NJM064M | IC | 1 | |
| IC3507 | UPD71055GB | IC | 1 | |
| IC3508 | MN12821R | IC | 1 | |
| IC3510 | MC14053BF | IC | 1 | |
| IC3511 | NJM064M | IC | 1 | |
| IC3513 | NJM064M | IC | 1 | |
| IC3514 | 74AC138SJ | IC | 1 | |
| IC3515 | 74AC11SJ | IC | 1 | |
| IC3516 | 74AC00SJ | IC | 1 | |
| IC3517 | 74AC04SJ | IC | 1 | |
| IC3518 | XC62AP5002P | IC | 1 | |
| IC3519 | MB88344PFV | IC | 1 | |
| IC3520 | MC74HC4052F | IC | 1 | |
| IC3521-23 | MB88351PF | IC | 3 | |
| IC3525 | MC14053BF | IC | 1 | |
| IC3526 | NJM2904M | IC | 1 | |
| IC3528 | 74AC138SJ | IC | 1 | |
| IC3529 | MC14053BF | IC | 1 | |
| IC3530 | IDT71321A55 | IC | 1 | |
| IC3531 | MC74HC244AF | IC | 1 | |
| IC3532 | MC14053BF | IC | 1 | |
| IC3533 | MC74HC244AF | IC | 1 | |
| IC3701 | NJM2904M | IC | 1 | |
| | | | | |
| IF3502 | VJF1047 | IC SOCKET | 1 | |
| IF3505 | VJF1047 | IC SOCKET | 1 | |
| | | | | |
| | | | | |
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| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| IS3502 | VJS3427X032 | CONNECTOR (FEMALE) | 1 | |
| IS3505 | VJS3427X032 | CONNECTOR (FEMALE) | 1 | |
| | | | | |
| L3500-02 | VLQ0319K101 | COIL 100UH | 3 | |
| | | | | |
| P3501 | VJP3657 | CONNECTOR (MALE) | 1 | |
| P3502 | VJP3506A100 | CONNECTOR (MALE) | 1 | |
| P3503 | VJP3358C012 | CONNECTOR (MALE) | 1 | |
| | | | | |
| Q3500-02 | 2SA1532-B | TRANSISTOR | 3 | |
| Q3503-05 | 2SD1819A | TRANSISTOR | 3 | |
| | | | | |
| QR3500-02 | UN5213 | TRANSISTOR-RESISTOR | 3 | |
| QR3503 | UN5113 | TRANSISTOR-RESISTOR | 1 | |
| | | | | |
| R3500 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R3501 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R3503, 04 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R3505 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R3506 | ERJ3GEYJ680 | M. RESISTOR CH 1/16W 68 | 1 | |
| R3507 | ERJ3GEYJ105 | M. RESISTOR CH 1/16W 1M | 1 | |
| R3508 | ERJ3GEYJ221 | M. RESISTOR CH 1/16W 220 | 1 | |
| R3510 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R3511, 12 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R3513-17 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 5 | |
| R3518-23 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 6 | |
| R3524 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R3526-28 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 3 | |
| R3529 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R3531 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R3535, 36 | VRE0071E363 | M. RESISTOR CH 1/10W 36K | 2 | |
| R3537 | VRE0071E683 | M. RESISTOR CH 1/10W 68K | 1 | |
| R3538 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R3539 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R3540 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R3541, 42 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R3543 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R3545 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3547-49 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 3 | |
| R3550 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R3551 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R3553, 54 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 2 | |
| R3555 | ERJ3GEYG822 | M. RESISTOR CH1/16W 8. 2K | 1 | |
| R3562 | VRE0071E183 | M. RESISTOR CH 1/10W 18K | 1 | |
| R3563 | VRE0071E153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R3564 | ERJ3GEYJ273 | M. RESISTOR CH 1/16W 27K | 1 | |
| R3565 | VRE0071E183 | M. RESISTOR CH 1/10W 18K | 1 | |
| R3566 | VRE0071E123 | M. RESISTOR CH 1/16W 12K | 1 | |
| R3567 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3575-77 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 3 | |
| R3578 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3579 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R3580 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R3581 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3582-84 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 3 | |
| R3585 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3589 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R3590-93 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 4 | |
| R3594 | ERJ3GEYJ562 | M. RESISTOR CH 1/16W 5. 6K | 1 | |
| R3595 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R3597 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 1 | |
| R3598 | ERJ3GEYJ823 | M. RESISTOR CH 1/16W 82K | 1 | |
| R3599 | ERJ3GEYJ824 | M. RESISTOR CH 1/16W 820K | 1 | |
| R3600 | ERJ3GEYJ823 | M. RESISTOR CH 1/16W 82K | 1 | |
| R3601 | ERJ3GEYJ824 | M. RESISTOR CH 1/16W 820K | 1 | |
| R3602 | ERJ3GEYJ823 | M. RESISTOR CH 1/16W 82K | 1 | |
| R3603 | ERJ3GEYJ824 | M. RESISTOR CH 1/16W 820K | 1 | |
| R3604 | ERJ3GEYJ562 | M. RESISTOR CH 1/16W 5. 6K | 1 | |
| R3605 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R3606 | ERJ3GEYJ562 | M. RESISTOR CH 1/16W 5. 6K | 1 | |
| R3607 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R3608 | ERJ3GEYJ562 | M. RESISTOR CH 1/16W 5. 6K | 1 | |
| R3609 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R3610-13 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 4 | |
| R3614-16 | VRE0071E683 | M. RESISTOR CH 1/10W 68K | 3 | |
| | | | | |
| | | | | |

VEP26074C

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R3617-19 | VRE0071E153 | M. RESISTOR CH 1/16W 15K | 3 | |
| R3620-22 | ERJ3GEYJ272 | M. RESISTOR CH 1/16W 2.7K | 3 | |
| R3625 | VRE0071E272 | M. RESISTOR CH 1/10W 2.7K | 1 | |
| R3626-28 | VRE0071E332 | M. RESISTOR CH1/16W 3.3K | 3 | |
| R3629-31 | ERJ3GEYJ684 | M. RESISTOR CH 1/16W 680K | 3 | |
| R3632-34 | VRE0071E473 | M. RESISTOR CH1/16W 47K | 3 | |
| R3635, 36 | VRE0071E272 | M. RESISTOR CH 1/10W 2.7K | 2 | |
| R3637 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R3638-40 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 3 | |
| R3651 | VRE0071E682 | M. RESISTOR CH1/16W 6.8K | 1 | |
| R3652 | VRE0071E123 | M. RESISTOR CH 1/16W 12K | 1 | |
| R3701 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 1 | |
| R3702 | VRE0071E303 | M. RESISTOR CH 1/10W 30K | 1 | |
| R3703 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 1 | |
| | | | | |
| TG3500 | EYF6CU | TEST POINT | 1 | |
| | | | | |
| X3501 | VSX0624 | CRYSTAL OSCILLATOR | 1 | |
| | | | | |
| | | MISCELLANEOUS | | |
| | | | | |
| | XSN2+6 | SCREW | 2 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|

VEP23275A

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| ■ | VEP23275A | P.C.BOARD W/COMPONENT | 1 | (RTL) |
| | | CAMERA DSP | | |
| | | | | |
| C3001 | ECEV0JV101Q | E.CAPACITOR CH6.3V 100U | 1 | |
| C3002 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3003 | ECEV0GV470Q | E.CAPACITOR CH 4V 47U | 1 | |
| C3004 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3006-11 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 6 | |
| C3013 | ECEV0GV470Q | E.CAPACITOR CH 4V 47U | 1 | |
| C3014, 15 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 2 | |
| C3017-20 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 4 | |
| C3022 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3023 | ECEV0GV470Q | E.CAPACITOR CH 4V 47U | 1 | |
| C3024 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3026-31 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 6 | |
| C3033 | ECEV0GV470Q | E.CAPACITOR CH 4V 47U | 1 | |
| C3034, 35 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 2 | |
| C3037-39 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 3 | |
| C3042 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3043 | ECEV0GV470Q | E.CAPACITOR CH 4V 47U | 1 | |
| C3044 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3046-51 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 6 | |
| C3053 | ECEV0GV470Q | E.CAPACITOR CH 4V 47U | 1 | |
| C3054, 55 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 2 | |
| C3057-59 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 3 | |
| C3061 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3063 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3065 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3066 | ECEV0GV470Q | E.CAPACITOR CH 4V 47U | 1 | |
| C3067, 68 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 2 | |
| C3069, 70 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 2 | |
| C3071-73 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 3 | |
| C3074 | ECEV0GV470Q | E.CAPACITOR CH 4V 47U | 1 | |
| C3075 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3077 | ECEV0GV470Q | E.CAPACITOR CH 4V 47U | 1 | |
| C3101-07 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 7 | |
| C3108 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3109-17 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 9 | |
| C3119-24 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 6 | |
| C3127 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3130 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3131 | ECEV0GV470Q | E.CAPACITOR CH 4V 47U | 1 | |
| C3201 | ECEV0JV470Q | E.CAPACITOR CH6.3V 47U | 1 | |
| C3202 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3203 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3204-08 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 5 | |
| C3210 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3211 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3212-16 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 5 | |
| C3217 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3218 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3223 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3224 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3301-04 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 4 | |
| C3305-07 | ECUX1H330JCV | C.CAPACITOR CH 50V 33P | 3 | |
| C3311-15 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 5 | |
| C3316-18 | ECUX1H330JCV | C.CAPACITOR CH 50V 33P | 3 | |
| C3319 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3320 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3321 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3323 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3324 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3325 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3326 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3327 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3328 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| | | | | |
| IC3001-03 | XC62AP3002P | IC | 3 | |
| IC3004-06 | MN6577H | IC | 3 | |
| IC3007-09 | HD151015 | IC | 3 | |
| IC3010-12 | 74AC574SJ | IC | 3 | |
| IC3013 | TC7SH86FU | IC | 1 | |
| IC3014 | NJM2904M | IC | 1 | |
| IC3015 | HD151015 | IC | 1 | |
| IC3016 | NJM431U | IC | 1 | |
| IC3101 | VY06632 | IC | 1 | |
| IC3102 | VY06633 | IC | 1 | |
| IC3103 | MC74HC04AF | IC | 1 | |
| IC3104 | 74AC86SJ | IC | 1 | |
| IC3201 | XC62AP5002P | IC | 1 | |
| IC3202 | ADV7122KST50 | IC | 1 | |
| IC3203 | XC62AP5002P | IC | 1 | |
| IC3204 | ADV7122KST50 | IC | 1 | |
| IC3205, 06 | AD589JR | IC | 2 | |
| IC3301 | K6256CLG7L | IC | 1 | |
| IC3302 | MC74HC245AF | IC | 1 | |
| IC3303 | MB86023PF | IC | 1 | |
| IC3304 | K6256CLG7L | IC | 1 | |
| IC3305 | MC74HC245AF | IC | 1 | |
| IC3306 | MB86023PF | IC | 1 | |
| IC3307 | XC62AP5002P | IC | 1 | |
| IC3308 | XC62DN5002P | IC | 1 | |
| | | | | |
| L3001 | VLQ0319K101 | COIL 100UH | 1 | |
| L3002 | ERJ8GCY0R00 | M.RESISTOR CH 1/8W 0 | 1 | |
| L3003 | VLQ0319K101 | COIL 100UH | 1 | |
| L3201, 02 | VLQ0319K101 | COIL 100UH | 2 | |
| | | | | |
| P3001 | VJS3505A100 | CONNECTOR (FEMALE) | 1 | |
| P3002 | VJP3658D030 | CONNECTOR (MALE) | 1 | |
| | | | | |
| Q3201 | 2SB1218A | TRANSISTOR | 1 | |
| Q3202 | 2SD1819A | TRANSISTOR | 1 | |
| Q3203 | 2SB1218A | TRANSISTOR | 1 | |
| Q3204, 05 | 2SD1819A | TRANSISTOR | 2 | |
| | | | | |
| R3001 | VRE0071E151 | M.RESISTOR CH 1/10W 150 | 1 | |
| R3002 | VRE0071E152 | M.RESISTOR CH 1/10W 1.5K | 1 | |
| R3033-35 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 3 | |
| R3041 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3042-44 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 3 | |
| R3045-47 | ERJ3GEYJ221 | M.RESISTOR CH 1/16W 220 | 3 | |
| R3050-64 | EXB24V101J | RESISTOR-RESISTOR | 15 | |
| R3066 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3068, 69 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 2 | |
| R3071, 72 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 2 | |
| R3073-75 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 3 | |
| R3102 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3104 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3105-07 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 3 | |
| R3109, 10 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 2 | |
| R3112 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3114 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3118 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3119-28 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 10 | |
| R3141 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R3201-25 | EXB24V101J | RESISTOR-RESISTOR | 25 | |
| R3251 | VRE0071E561 | M.RESISTOR CH 1/16W 560 | 1 | |
| R3252-54 | VRE0071E750 | M.RESISTOR CH 1/10W 75 | 3 | |
| R3255 | VRE0071E561 | M.RESISTOR CH 1/16W 560 | 1 | |
| R3256, 57 | VRE0071E750 | M.RESISTOR CH 1/10W 75 | 2 | |
| R3258 | VRE0071E122 | M.RESISTOR CH 1/10W 1.2K | 1 | |
| R3259 | VRE0071E302 | M.RESISTOR CH 1/10W 3K | 1 | |
| R3260 | VRE0071E122 | M.RESISTOR CH 1/10W 1.2K | 1 | |
| R3261 | ERJ3GEYJ681 | M.RESISTOR CH 1/16W 680 | 1 | |
| R3262 | VRE0071E222 | M.RESISTOR CH 1/16W 2.2K | 1 | |
| R3263 | VRE0071E750 | M.RESISTOR CH 1/10W 75 | 1 | |
| R3301 | ERJ3GEYJ563 | M.RESISTOR CH 1/16W 56K | 1 | |
| R3302-04 | ERJ3GEYJ124 | M.RESISTOR CH 1/16W 120K | 3 | |
| R3305 | ERJ3GEYJ563 | M.RESISTOR CH 1/16W 56K | 1 | |
| R3306-08 | ERJ3GEYJ153 | M.RESISTOR CH 1/16W 15K | 3 | |
| R3312-14 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 3 | |
| R3315-17 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 3 | |
| | | | | |
| TG3001 | EYF6CU | TEST POINT | 1 | |
| TG3101 | EYF6CU | TEST POINT | 1 | |
| TG3201 | EYF6CU | TEST POINT | 1 | |

VEP23275A

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks | Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| VR3001 | VRV0161B102 | V. RESISTOR 1K | 1 |  |  |  |  |  |  |

## VEP23276B

| Ref.No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| ■ | VEP23276B | P.C.BOARD W/COMPONENT | 1 | (RTL) |
| | | CAMERA ENCODER | | |
| C3001 | ECUX1H560JCV | C.CAPACITOR CH 50V 56P | 1 | |
| C3002 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3006,07 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 2 | |
| C3008 | ECUX1H121JCV | C.CAPACITOR CH 50V 120P | 1 | |
| C3009 | ECUX1H120JCV | C.CAPACITOR CH 50V 12P | 1 | |
| C3010 | ECUX1H101JCV | C.CAPACITOR CH 50V 100P | 1 | |
| C3011 | ECUX1H150JCV | C.CAPACITOR CH 50V 15P | 1 | |
| C3013 | ECEV1HV010Q | E.CAPACITOR CH 50V 1U | 1 | |
| C3014 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3016 | ECUX1H121JCV | C.CAPACITOR CH 50V 120P | 1 | |
| C3017 | ECUX1H120JCV | C.CAPACITOR CH 50V 12P | 1 | |
| C3018 | ECUX1H101JCV | C.CAPACITOR CH 50V 100P | 1 | |
| C3019 | ECUX1H150JCV | C.CAPACITOR CH 50V 15P | 1 | |
| C3021 | ECEV1HV010Q | E.CAPACITOR CH 50V 1U | 1 | |
| C3022,23 | ECUX1H220JCV | C.CAPACITOR CH 50V 22P | 2 | |
| C3024 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 1 | |
| C3025 | ECUX1H220JCV | C.CAPACITOR CH 50V 22P | 1 | |
| C3026 | ECUX1H100DCV | C.CAPACITOR CH 50V 10P | 1 | |
| C3027 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 1 | |
| C3028 | ECUX1H151JCV | C.CAPACITOR CH 50V 150P | 1 | |
| C3029 | ECUX1H561JCV | C.CAPACITOR CH 50V 560P | 1 | |
| C3030-32 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 3 | |
| C3033 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3034 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3035 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3036 | ECUM1E473KBN | C.CAPACITOR CH 25V 0.047U | 1 | |
| C3037 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3038 | ECUM1E473KBN | C.CAPACITOR CH 25V 0.047U | 1 | |
| C3039 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3040 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3041 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3042 | ECUM1E473KBN | C.CAPACITOR CH 25V 0.047U | 1 | |
| C3043 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 1 | |
| C3044 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3045 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3046 | ECUX1H101JCV | C.CAPACITOR CH 50V 100P | 1 | |
| C3047 | ECUX1H020CCV | C.CAPACITOR CH 50V 2P | 1 | |
| C3048 | ECUX1H180JCV | C.CAPACITOR CH 50V 18P | 1 | |
| C3049 | ECUX1H680JCV | C.CAPACITOR CH 50V 68P | 1 | |
| C3050 | ECUX1H090DCV | C.CAPACITOR CH 50V 9P | 1 | |
| C3051 | ECUX1H330JCV | C.CAPACITOR CH 50V 33P | 1 | |
| C3052 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3053,54 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 2 | |
| C3055 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3056 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3057 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3058 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3059 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3060 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3061 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3064,65 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 2 | |
| C3068 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3069 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3070-73 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 4 | |
| C3101 | ECUX1H220JCV | C.CAPACITOR CH 50V 22P | 1 | |
| C3102 | ECUX1H181JCV | C.CAPACITOR CH 50V 180P | 1 | |
| C3103 | ECUX1H330JCV | C.CAPACITOR CH 50V 33P | 1 | |
| C3104 | ECUX1H180JCV | C.CAPACITOR CH 50V 18P | 1 | |
| C3105-10 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 6 | |
| C3111 | ECUX1H220JCV | C.CAPACITOR CH 50V 22P | 1 | |
| C3112 | ECUX1H181JCV | C.CAPACITOR CH 50V 180P | 1 | |
| C3113 | ECUX1H330JCV | C.CAPACITOR CH 50V 33P | 1 | |
| C3114 | ECUX1H220JCV | C.CAPACITOR CH 50V 22P | 1 | |
| C3115 | ECUX1H181JCV | C.CAPACITOR CH 50V 180P | 1 | |
| C3116 | ECUX1H330JCV | C.CAPACITOR CH 50V 33P | 1 | |
| C3120 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3121 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3122 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3123 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3124 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3125 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3126 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3127 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3128 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3129 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3130 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3131 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3132 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3134 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3135 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3136 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3137 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3138 | ECUX1H181JCV | C.CAPACITOR CH 50V 180P | 1 | |
| C3139 | ECEV1HN010Q | E.CAPACITOR CH 50V 1U | 1 | |
| C3140-42 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 3 | |
| C3143 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3144 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3145 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3146 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3148,49 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 2 | |
| C3201 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3202 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3203 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3204 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3205 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3206 | ECUX1H100DCV | C.CAPACITOR CH 50V 10P | 1 | |
| C3207,08 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 2 | |
| C3209,10 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 2 | |
| C3211 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3212 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3213 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3214 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3215 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3216 | ECUX1H100DCV | C.CAPACITOR CH 50V 10P | 1 | |
| C3217 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3219,20 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 2 | |
| C3221 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3224-27 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 4 | |
| C3401 | ECEV1CV100Q | E.CAPACITOR CH 16V 10U | 1 | |
| C3402-04 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 3 | |
| C3405 | ECEV1CV100Q | E.CAPACITOR CH 16V 10U | 1 | |
| C3406 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3407 | ECEV0GV221Q | E.CAPACITOR CH 4V 220U | 1 | |
| C3409-11 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 3 | |
| C3412 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3413 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3414 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3415-17 | ECEV1CV100Q | E.CAPACITOR CH 16V 10U | 3 | |
| C3418 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3419 | ECEV1CV100Q | E.CAPACITOR CH 16V 10U | 1 | |
| C3420 | ECEV0GV221Q | E.CAPACITOR CH 4V 220U | 1 | |
| C3421 | ECUX1H050CCV | C.CAPACITOR CH 50V 5P | 1 | |
| C3422 | ECEV0JN470Q | E.CAPACITOR CH6.3V 47U | 1 | |
| C3423 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3424 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3425,26 | ECUX1H220JCV | C.CAPACITOR CH 50V 22P | 2 | |
| C3427 | ECUX1H470JCV | C.CAPACITOR CH 50V 47P | 1 | |
| C3428-31 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 4 | |
| C3434 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3435 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C3436 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C3437 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| FL3101-03 | VLF1305 | FILTER | 3 | |
| FL3201,02 | VLF1305 | FILTER | 2 | |
| IC3001 | AD8047AR | IC | 1 | |
| IC3003 | XC62AP5002P | IC | 1 | |
| IC3004 | M51272FP | IC | 1 | |
| IC3005 | XC62DN5002P | IC | 1 | |
| IC3006 | TC4W53FU | IC | 1 | |
| IC3101 | AD8011AR | IC | 1 | |
| IC3102 | MC74HC4053F | IC | 1 | |
| IC3103 | XC62AP5002P | IC | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| IC3104 | XC62DN5002P | IC | 1 | |
| IC3105 | NJM062M | IC | 1 | |
| IC3106 | MC74HC00AF | IC | 1 | |
| IC3107 | TC4W53FU | IC | 1 | |
| IC3201, 02 | AD8011AR | IC | 2 | |
| IC3203 | MC74HC4053F | IC | 1 | |
| IC3204, 05 | TC4W53FU | IC | 2 | |
| IC3401-03 | NJM2535M | IC | 3 | |
| IC3404 | AD8011AR | IC | 1 | |
| IC3405 | XC62AP5002P | IC | 1 | |
| IC3406 | AD8011AR | IC | 1 | |
| | | | | |
| L3002 | VLQ0426J820 | COIL 82UH | 1 | |
| L3003 | VLQ0163J820 | COIL 82UH | 1 | |
| L3004, 05 | VLQ0426J470 | COIL 47UH | 2 | |
| L3006 | VLQ0426J180 | COIL 18UH | 1 | |
| L3007 | VLQ0426J560 | COIL 56UH | 1 | |
| L3008, 09 | VLQ0426J120 | COIL 12UH | 2 | |
| L3010-13 | VLQ0319K101 | COIL 100UH | 4 | |
| L3101-03 | VLQ0426J101 | COIL 100UH | 3 | |
| L3104-06 | VLQ0319K101 | COIL 100UH | 3 | |
| L3108, 09 | VLQ0319K101 | COIL 100UH | 2 | |
| L3201-04 | VLQ0319K101 | COIL 100UH | 4 | |
| L3401-03 | VLQ0319K101 | COIL 100UH | 3 | |
| | | | | |
| P3001 | VJP3657 | CONNECTOR (MALE) | 1 | |
| | | | | |
| Q3003 | 2SD1819A | TRANSISTOR | 1 | |
| Q3005 | 2SD1819A | TRANSISTOR | 1 | |
| Q3006-08 | 2SB1218A | TRANSISTOR | 3 | |
| Q3009 | 2SD1819A | TRANSISTOR | 1 | |
| Q3010 | XN4401 | TRANSISTOR-RESISTOR | 1 | |
| Q3011 | XN4501 | TRANSISTOR-RESISTOR | 1 | |
| Q3012 | XN4401 | TRANSISTOR-RESISTOR | 1 | |
| Q3013 | XN4501 | TRANSISTOR-RESISTOR | 1 | |
| Q3014, 15 | 2SD1819A | TRANSISTOR | 2 | |
| Q3016 | XN4501 | TRANSISTOR-RESISTOR | 1 | |
| Q3101 | XN4401 | TRANSISTOR-RESISTOR | 1 | |
| Q3102 | XN4501 | TRANSISTOR-RESISTOR | 1 | |
| Q3103-06 | 2SD1819A | TRANSISTOR | 4 | |
| Q3107-09 | 2SB1218A | TRANSISTOR | 3 | |
| Q3201-04 | 2SD1819A | TRANSISTOR | 4 | |
| Q3206 | XN4401 | TRANSISTOR-RESISTOR | 1 | |
| Q3207 | XN4501 | TRANSISTOR-RESISTOR | 1 | |
| Q3209, 10 | 2SD1819A | TRANSISTOR | 2 | |
| Q3212 | 2SD1819A | TRANSISTOR | 1 | |
| Q3214 | XN4401 | TRANSISTOR-RESISTOR | 1 | |
| Q3215 | XN4501 | TRANSISTOR-RESISTOR | 1 | |
| Q3401-03 | 2SD1819A | TRANSISTOR | 3 | |
| | | | | |
| R3001 | VRE0071E470 | M. RESISTOR CH 1/10W 47 | 1 | |
| R3002 | VRE0071E101 | M. RESISTOR CH 1/10W 100 | 1 | |
| R3003 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3010 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3011 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R3012 | VRE0071E241 | M. RESISTOR CH 1/10W 240 | 1 | |
| R3013 | VRE0071E361 | M. RESISTOR CH 1/10W 360 | 1 | |
| R3015 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R3020 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3021 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R3022, 23 | VRE0071E361 | M. RESISTOR CH 1/10W 360 | 2 | |
| R3025 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R3026 | VRE0071E821 | M. RESISTOR CH 1/10W 820 | 1 | |
| R3027 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3028 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R3029 | VRE0071E821 | M. RESISTOR CH 1/10W 820 | 1 | |
| R3030 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3031 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R3032 | VRE0071E471 | M. RESISTOR CH 1/10W 470 | 1 | |
| R3033 | VRE0071E241 | M. RESISTOR CH 1/10W 240 | 1 | |
| R3034 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R3038, 39 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 2 | |
| R3040 | VRE0071E273 | M. RESISTOR CH 1/10W 27K | 1 | |
| R3041, 42 | VRE0071E183 | M. RESISTOR CH 1/10W 18K | 2 | |
| R3043 | VRE0071E273 | M. RESISTOR CH 1/10W 27K | 1 | |
| R3044 | VRE0071E621 | M. RESISTOR CH 1/10W 620 | 1 | |
| R3045 | VRE0071E821 | M. RESISTOR CH 1/10W 820 | 1 | |
| R3046 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R3047 | VRE0071E221 | M. RESISTOR CH 1/10W 220 | 1 | |
| R3048 | VRE0071E272 | M. RESISTOR CH 1/10W 2. 7K | 1 | |
| R3049 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3050, 51 | VRE0071E561 | M. RESISTOR CH 1/16W 560 | 2 | |
| R3052, 53 | ERJ3GEYJ220 | M. RESISTOR CH 1/16W 22 | 2 | |
| R3054 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R3055 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R3056 | ERJ3GEYJ100 | M. RESISTOR CH 1/16W 10 | 1 | |
| R3057 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R3058 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R3059 | ERJ3GEYJ100 | M. RESISTOR CH 1/16W 10 | 1 | |
| R3060 | VRE0071E680 | M. RESISTOR CH 1/10W 68 | 1 | |
| R3061, 62 | ERJ3GEYJ220 | M. RESISTOR CH 1/16W 22 | 2 | |
| R3063 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R3064 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R3065 | ERJ3GEYJ100 | M. RESISTOR CH 1/16W 10 | 1 | |
| R3066 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R3067 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R3068 | ERJ3GEYJ100 | M. RESISTOR CH 1/16W 10 | 1 | |
| R3069 | VRE0071E680 | M. RESISTOR CH 1/10W 68 | 1 | |
| R3073 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3074 | VRE0071E912 | M. RESISTOR CH 1/10W 9. 1K | 1 | |
| R3075 | VRE0071E822 | M. RESISTOR CH 1/10W 8. 2K | 1 | |
| R3078 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3079 | VRE0071E910 | M. RESISTOR CH 1/10W 91 | 1 | |
| R3080 | VRE0071E390 | M. RESISTOR CH 1/10W 39 | 1 | |
| R3081 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R3095 | VRT014182150 | THERMISTOR | 1 | |
| R3096 | VRT014116250 | THERMISTOR | 1 | |
| R3101-03 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 3 | |
| R3104 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3105 | VRE0071E821 | M. RESISTOR CH 1/10W 820 | 1 | |
| R3106 | VRE0071E181 | M. RESISTOR CH 1/10W 180 | 1 | |
| R3107 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3108 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3109 | VRE0071E151 | M. RESISTOR CH 1/10W 150 | 1 | |
| R3111 | VRE0071E911 | M. RESISTOR CH 1/10W 910 | 1 | |
| R3112 | VRE0071E122 | M. RESISTOR CH 1/10W 1. 2K | 1 | |
| R3113 | VRE0071E182 | M. RESISTOR CH 1/10W 1. 8K | 1 | |
| R3115 | VRE0071E132 | M. RESISTOR CH 1/10W 1. 3K | 1 | |
| R3116 | VRE0071E821 | M. RESISTOR CH 1/10W 820 | 1 | |
| R3117 | VRE0071E271 | M. RESISTOR CH 1/10W 270 | 1 | |
| R3118 | VRE0071E123 | M. RESISTOR CH 1/16W 12K | 1 | |
| R3120 | VRE0071E392 | M. RESISTOR CH 1/10W 3. 9K | 1 | |
| R3122 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3123, 24 | ERJ3GEYJ220 | M. RESISTOR CH 1/16W 22 | 2 | |
| R3125, 26 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 2 | |
| R3127 | VRE0071E680 | M. RESISTOR CH 1/10W 68 | 1 | |
| R3128, 29 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 2 | |
| R3130 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R3131 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R3132 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3133 | VRE0071E681 | M. RESISTOR CH 1/10W 680 | 1 | |
| R3134 | VRE0071E331 | M. RESISTOR CH 1/10W 330 | 1 | |
| R3135 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3136 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3137 | VRE0071E151 | M. RESISTOR CH 1/10W 150 | 1 | |
| R3139 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3140 | VRE0071E751 | M. RESISTOR CH 1/10W 750 | 1 | |
| R3141 | VRE0071E182 | M. RESISTOR CH 1/10W 1. 8K | 1 | |
| R3143 | ERJ3GEYJ182 | M. RESISTOR CH 1/16W 1. 8K | 1 | |
| R3144 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R3145 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3146 | VRE0071E751 | M. RESISTOR CH 1/10W 750 | 1 | |
| R3147 | VRE0071E221 | M. RESISTOR CH 1/10W 220 | 1 | |
| R3148 | VRE0071E390 | M. RESISTOR CH 1/10W 39 | 1 | |
| R3149 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3150 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3152 | VRE0071E151 | M. RESISTOR CH 1/10W 150 | 1 | |
| R3154 | VRE0071E102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3155 | VRE0071E621 | M. RESISTOR CH 1/10W 620 | 1 | |
| R3156 | VRE0071E182 | M. RESISTOR CH 1/10W 1. 8K | 1 | |

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| Ref.No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R3158 | ERJ3GEYJ182 | M.RESISTOR CH 1/16W 1.8K | 1 | |
| R3159 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R3160 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 1 | |
| R3161-63 | ERJ3GEYJ222 | M.RESISTOR CH 1/16W 2.2K | 3 | |
| R3165 | VRE0071E471 | M.RESISTOR CH 1/10W 470 | 1 | |
| R3166 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 1 | |
| R3167 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R3168 | ERJ3GEYG472 | M.RESISTOR CH 1/16W 4.7K | 1 | |
| R3169, 70 | ERJ3GEYJ470 | M.RESISTOR CH 1/16W 47 | 2 | |
| R3171, 72 | ERJ3GEYJ100 | M.RESISTOR CH 1/16W 10 | 2 | |
| R3174 | ERJ3GEYJ470 | M.RESISTOR CH 1/16W 47 | 1 | |
| R3175 | ERJ3GEYJ221 | M.RESISTOR CH 1/16W 220 | 1 | |
| R3201 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R3202 | VRE0071E302 | M.RESISTOR CH 1/10W 3K | 1 | |
| R3203 | VRE0071E102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R3204 | VRE0071E101 | M.RESISTOR CH 1/10W 100 | 1 | |
| R3206 | VRE0071E681 | M.RESISTOR CH 1/10W 680 | 1 | |
| R3207 | VRE0071E242 | M.RESISTOR CH 1/10W 2.4K | 1 | |
| R3208 | VRE0071E222 | M.RESISTOR CH 1/16W 2.2K | 1 | |
| R3209 | VRE0071E361 | M.RESISTOR CH 1/10W 360 | 1 | |
| R3210 | VRE0071E222 | M.RESISTOR CH 1/16W 2.2K | 1 | |
| R3214 | ERJ3GEYJ122 | M.RESISTOR CH 1/16W 1.2K | 1 | |
| R3215 | VRE0071E242 | M.RESISTOR CH 1/10W 2.4K | 1 | |
| R3216 | VRE0071E562 | M.RESISTOR CH 1/16W 5.6K | 1 | |
| R3217 | VRE0071E681 | M.RESISTOR CH 1/10W 680 | 1 | |
| R3218 | VRE0071E152 | M.RESISTOR CH 1/10W 1.5K | 1 | |
| R3219 | ERJ3GEYJ821 | M.RESISTOR CH 1/16W 820 | 1 | |
| R3220 | VRE0071E124 | M.RESISTOR CH 1/16W 120K | 1 | |
| R3221 | ERJ3GEYG682 | M.RESISTOR CH1/16W 6.8K | 1 | |
| R3223, 24 | ERJ3GEYJ220 | M.RESISTOR CH 1/16W 22 | 2 | |
| R3227 | ERJ3GEYG682 | M.RESISTOR CH1/16W 6.8K | 1 | |
| R3229 | VRE0071E680 | M.RESISTOR CH 1/10W 68 | 1 | |
| R3233 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R3234 | VRE0071E302 | M.RESISTOR CH 1/10W 3K | 1 | |
| R3235 | VRE0071E102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R3236 | VRE0071E101 | M.RESISTOR CH 1/10W 100 | 1 | |
| R3238 | VRE0071E681 | M.RESISTOR CH 1/10W 680 | 1 | |
| R3239 | VRE0071E242 | M.RESISTOR CH 1/10W 2.4K | 1 | |
| R3240 | VRE0071E222 | M.RESISTOR CH 1/16W 2.2K | 1 | |
| R3241 | VRE0071E361 | M.RESISTOR CH 1/10W 360 | 1 | |
| R3242 | VRE0071E222 | M.RESISTOR CH 1/16W 2.2K | 1 | |
| R3247 | VRE0071E242 | M.RESISTOR CH 1/10W 2.4K | 1 | |
| R3248 | VRE0071E562 | M.RESISTOR CH 1/16W 5.6K | 1 | |
| R3249 | ERJ3GEYJ821 | M.RESISTOR CH 1/16W 820 | 1 | |
| R3250 | VRE0071E681 | M.RESISTOR CH 1/10W 680 | 1 | |
| R3251 | VRE0071E152 | M.RESISTOR CH 1/10W 1.5K | 1 | |
| R3253 | VRE0071E124 | M.RESISTOR CH 1/16W 120K | 1 | |
| R3254 | ERJ3GEYG682 | M.RESISTOR CH1/16W 6.8K | 1 | |
| R3256, 57 | ERJ3GEYJ220 | M.RESISTOR CH 1/16W 22 | 2 | |
| R3260 | ERJ3GEYG682 | M.RESISTOR CH1/16W 6.8K | 1 | |
| R3262 | VRE0071E680 | M.RESISTOR CH 1/10W 68 | 1 | |
| R3263, 64 | ERJ3GEYJ470 | M.RESISTOR CH 1/16W 47 | 2 | |
| R3265, 66 | ERJ3GEYJ100 | M.RESISTOR CH 1/16W 10 | 2 | |
| R3267, 68 | ERJ3GEYJ470 | M.RESISTOR CH 1/16W 47 | 2 | |
| R3269, 70 | ERJ3GEYJ100 | M.RESISTOR CH 1/16W 10 | 2 | |
| R3273, 74 | ERJ3GEYJ470 | M.RESISTOR CH 1/16W 47 | 2 | |
| R3280 | VRE0071E752 | M.RESISTOR CH1/16W 7.5K | 1 | |
| R3281 | VRE0071E472 | M.RESISTOR CH 1/10W 4.7K | 1 | |
| R3401, 02 | VRE0071E562 | M.RESISTOR CH 1/16W 5.6K | 2 | |
| R3403 | VRE0071E272 | M.RESISTOR CH 1/10W 2.7K | 1 | |
| R3404 | VRE0071E332 | M.RESISTOR CH1/16W 3.3K | 1 | |
| R3406 | VRE0071E152 | M.RESISTOR CH 1/10W 1.5K | 1 | |
| R3408 | VRE0071E271 | M.RESISTOR CH 1/10W 270 | 1 | |
| R3409 | ERJ3GEYJ182 | M.RESISTOR CH 1/16W 1.8K | 1 | |
| R3410 | ERJ3GEYJ561 | M.RESISTOR CH 1/16W 560 | 1 | |
| R3412 | ERJ3GEYJ391 | M.RESISTOR CH 1/16W 390 | 1 | |
| R3413 | ERJ3GEYJ182 | M.RESISTOR CH 1/16W 1.8K | 1 | |
| R3414 | VRE0071E471 | M.RESISTOR CH 1/10W 470 | 1 | |
| R3416 | VRE0071E301 | M.RESISTOR CH 1/10W 300 | 1 | |
| R3417 | ERJ3GEYJ182 | M.RESISTOR CH 1/16W 1.8K | 1 | |
| R3418 | VRE0071E302 | M.RESISTOR CH 1/10W 3K | 1 | |
| R3420 | VRE0071E151 | M.RESISTOR CH 1/10W 150 | 1 | |
| R3422 | VRE0071E621 | M.RESISTOR CH 1/10W 620 | 1 | |
| R3423 | VRE0071E750 | M.RESISTOR CH 1/10W 75 | 1 | |
| R3424 | VRE0071E302 | M.RESISTOR CH 1/10W 3K | 1 | |

| Ref.No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R3425 | VRE0071E512 | M.RESISTOR CH 1/10W 5.1K | 1 | |
| R3426 | VRE0071E331 | M.RESISTOR CH 1/10W 330 | 1 | |
| R3428 | VRE0071E471 | M.RESISTOR CH 1/10W 470 | 1 | |
| R3429 | VRE0071E913 | M.RESISTOR CH 1/10W 91K | 1 | |
| R3430-32 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 3 | |
| R3433 | ERJ3GEYJ470 | M.RESISTOR CH 1/16W 47 | 1 | |
| | | | | |
| SW3101, 02 | VSS0342 | SWITCH | 2 | |
| SW3201, 02 | VSS0342 | SWITCH | 2 | |
| | | | | |
| TG3001 | EYF6CU | TEST POINT | 1 | |
| TG3201 | EYF6CU | TEST POINT | 1 | |
| | | | | |
| VC3001 | VCV0047 | TRIMMER | 1 | |
| | | | | |
| VR3003 | EVM7JGA00BE2 | V.RESISTOR 220 | 1 | |
| VR3005 | EVM7JGA00BE2 | V.RESISTOR 220 | 1 | |
| VR3006 | EVM7JGA00B14 | V.RESISTOR 10K | 1 | |
| VR3007 | EVM7JGA00B53 | V.RESISTOR 5K | 1 | |
| VR3008, 09 | VRV0161B202 | V.RESISTOR 2K | 2 | |
| VR3010 | VRV0161B201 | V.RESISTOR 200 | 1 | |
| VR3011 | EVM7JGA00B23 | V.RESISTOR 2K | 1 | |
| VR3012 | VRV0161B201 | V.RESISTOR 200 | 1 | |
| VR3101 | EVM7JGA00B14 | V.RESISTOR 10K | 1 | |
| VR3102 | EVM7JGA00BE2 | V.RESISTOR 220 | 1 | |
| VR3103 | EVM7JGA00B14 | V.RESISTOR 10K | 1 | |
| VR3104 | EVM7JGA00BE2 | V.RESISTOR 220 | 1 | |
| VR3105 | EVM7JGA00B14 | V.RESISTOR 10K | 1 | |
| VR3106 | EVM7JGA00BE2 | V.RESISTOR 220 | 1 | |
| VR3201, 02 | EVM7JGA00BE2 | V.RESISTOR 220 | 2 | |
| VR3401 | EVM7JGA00BE2 | V.RESISTOR 220 | 1 | |
| VR3403 | EVM7JGA00BE2 | V.RESISTOR 220 | 1 | |
| | | | | |
| | | MISCELLANEOUS | | |
| | | | | |
| | XSN2+6 | SCREW | 2 | |

## VEP23277B

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| ■ | VEP23277B | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | CAMERA SYNC | | |
| | | | | |
| C1 | ECST1CC336Z | T. CAPACITOR CH 16V 33U | 1 | |
| C2 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3-C5 | ECUX1H470JCV | C. CAPACITOR CH 50V 47P | 3 | |
| C6. C7 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3001. 02 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3003 | ECUX1H100DCV | C. CAPACITOR CH 50V 10P | 1 | |
| C3004 | ECUX1H151JCV | C. CAPACITOR CH 50V 150P | 1 | |
| C3005 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3013 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3014 | ECUX1H330JCV | C. CAPACITOR CH 50V 33P | 1 | |
| C3015. 16 | ECUX1H180JCV | C. CAPACITOR CH 50V 18P | 2 | |
| C3017 | ECUX1H220JCV | C. CAPACITOR CH 50V 22P | 1 | |
| C3020 | ECUX1H330JCV | C. CAPACITOR CH 50V 33P | 1 | |
| C3022 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3023 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C3024 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3025 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C3026-28 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C3029 | ECEV1HNR47Q | E. CAPACITOR CH 50V 0. 47U | 1 | |
| C3030 | ECUX1H102JV | C. CAPACITOR CH 50V 1000P | 1 | |
| C3031 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3032 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C3035 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C3036-38 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C3041 | ECEV1CV220Q | E. CAPACITOR CH 16V 22U | 1 | |
| C3042 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3045 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C3046 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3047 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C3048 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3049 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C3050 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3051 | ECUX1H561JCV | C. CAPACITOR CH 50V 560P | 1 | |
| C3056-64 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 9 | |
| C3065 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C3066 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3067 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C3068-70 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C3071 | ECEV1HNR47Q | E. CAPACITOR CH 50V 0. 47U | 1 | |
| C3072 | ECUX1H102JV | C. CAPACITOR CH 50V 1000P | 1 | |
| C3073 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3074 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C3076-78 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C3079 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C3080 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3081 | ECEV1HN010Q | E. CAPACITOR CH 50V 1U | 1 | |
| C3082 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3083 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C3084-86 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C3087 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C3088 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3089 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C3090. 91 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3092 | ECUX1H561JCV | C. CAPACITOR CH 50V 560P | 1 | |
| C3093. 94 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3095 | ECUX1H150JCV | C. CAPACITOR CH 50V 15P | 1 | |
| C3096 | ECUX1H820JCV | C. CAPACITOR CH 50V 82P | 1 | |
| C3097 | ECEV1CN100Q | E. CAPACITOR CH 16V 10U | 1 | |
| C3098-00 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C3101 | ECEV1EN3R3Q | E. CAPACITOR CH 25V 3. 3U | 1 | |
| C3102 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C3103 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3104 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C3105 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3107-09 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C3110 | ECEV1CN100Q | E. CAPACITOR CH 16V 10U | 1 | |
| C3111-13 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C3114 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C3115-17 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C3122 | ECUX1H120JCV | C. CAPACITOR CH 50V 12P | 1 | |
| C3123 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3124 | ECUX1H100DCV | C. CAPACITOR CH 50V 10P | 1 | |
| C3131 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3132 | ECUX1E223KBV | C. CAPACITOR CH 25V 0. 023U | 1 | |
| C3133. 34 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3135 | ECUX1H470JCV | C. CAPACITOR CH 50V 47P | 1 | |
| C3136 | ECUX1H181JCV | C. CAPACITOR CH 50V 180P | 1 | |
| C3137 | ECUX1H821JV | C. CAPACITOR CH 50V 820P | 1 | |
| C3138 | ECEV1CV220Q | E. CAPACITOR CH 16V 22U | 1 | |
| C3139. 40 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3141 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C3142-45 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 4 | |
| C3146 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C3147. 48 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3149 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C3150 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C3152-55 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 4 | |
| | | | | |
| D3003-07 | MA142K | DIODE | 5 | |
| D3011. 12 | MA142K | DIODE | 2 | |
| | | | | |
| IC1 | MC74HC04AF | IC | 1 | |
| IC2 | MC74HC153F | IC | 1 | |
| IC3001 | TC7S32FU | IC | 1 | |
| IC3002 | AD790JR | IC | 1 | |
| IC3003 | MC74HC00AF | IC | 1 | |
| IC3004 | TC7S04FU | IC | 1 | |
| IC3005 | MN74HC221S | IC | 1 | |
| IC3006 | MC74HC04AF | IC | 1 | |
| IC3007 | MC74HC125AF | IC | 1 | |
| IC3008 | AD790JR | IC | 1 | |
| IC3009 | MC74HC125AF | IC | 1 | |
| IC3010 | NJM062M | IC | 1 | |
| IC3011 | T160G16-1220 | IC | 1 | |
| IC3012 | MN74HC221S | IC | 1 | |
| IC3013-16 | MC74HC04AF | IC | 4 | |
| IC3017 | NJM062M | IC | 1 | |
| IC3018 | MC74HC04AF | IC | 1 | |
| IC3019. 20 | NJM062M | IC | 2 | |
| IC3021 | XC62AP5002P | IC | 1 | |
| IC3022 | AD790JR | IC | 1 | |
| IC3023 | MC14053BF | IC | 1 | |
| IC3024 | NJM062M | IC | 1 | |
| IC3025 | XC62AP5002P | IC | 1 | |
| IC3026 | AD790JR | IC | 1 | |
| IC3027 | UPD65650J203 | IC | 1 | |
| IC3028 | MN74HC221S | IC | 1 | |
| IC3031 | TC4W66F | IC | 1 | |
| IC3032 | 74AC04SJ | IC | 1 | |
| IC3033 | XC62AP5002P | IC | 1 | |
| IC3034 | EL4583CS | IC | 1 | |
| IC3035 | MC74HC157AF | IC | 1 | |
| IC3036 | MC74HC74AF | IC | 1 | |
| | | | | |
| L1 | VLQ0319K101 | COIL 100UH | 1 | |
| L3002 | VLQ0163J390 | COIL 39UH | 1 | |
| L3003-05 | VLQ0319K101 | COIL 100UH | 3 | |
| L3007-12 | VLQ0319K101 | COIL 100UH | 6 | |
| L3013 | VLQ0163J221 | COIL 220UH | 1 | |
| L3014. 15 | VLQ0319K101 | COIL 100UH | 2 | |
| L3021 | VLQ0163J4R7 | COIL 4. 7UH | 1 | |
| L3022 | VLQ0163J101 | COIL 100UH | 1 | |
| | | | | |
| P3001 | VJP3657 | CONNECTOR (MALE) | 1 | |
| | | | | |
| Q3001 | 2SD1819A | TRANSISTOR | 1 | |
| Q3002. 03 | 2SB1218A | TRANSISTOR | 2 | |
| Q3011 | 2SC3930-B | TRANSISTOR | 1 | |
| Q3012 | 2SA1532-B | TRANSISTOR | 1 | |
| Q3013 | 2SC3938-R | TRANSISTOR | 1 | |
| Q3014. 15 | 2SA1532-B | TRANSISTOR | 2 | |
| Q3016 | 2SB1218A | TRANSISTOR | 1 | |
| Q3017 | 2SD1819A | TRANSISTOR | 1 | |
| Q3018 | 2SB1218A | TRANSISTOR | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| Q3023 | 2SD1819A | TRANSISTOR | 1 | |
| | | | | |
| R1-R3 | VRE0071E101 | M. RESISTOR CH 1/10W 100 | 3 | |
| R4 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R6 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R8 | ERDS2TJ473 | C. RESISTOR 1/4W 47K | 1 | |
| R9 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R3001 | VRE0071E750 | M. RESISTOR CH 1/10W 75 | 1 | |
| R3002 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R3004 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3006 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3007 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R3008 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R3009 | ERJ3GEYJ274 | M. RESISTOR CH 1/16W 270K | 1 | |
| R3013 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R3014 | ERJ3GEYJ224 | M. RESISTOR CH 1/16W 220K | 1 | |
| R3015 | ERJ3GEYJ272 | M. RESISTOR CH 1/16W 2. 7K | 1 | |
| R3016 | ERJ3GEYJ561 | M. RESISTOR CH 1/16W 560 | 1 | |
| R3017 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R3018 | VRE0071E561 | M. RESISTOR CH 1/16W 560 | 1 | |
| R3021 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3022 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R3023, 24 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 2 | |
| R3025 | VRE0071E392 | M. RESISTOR CH 1/10W 3. 9K | 1 | |
| R3027 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3028 | ERJ3GEYJ561 | M. RESISTOR CH 1/16W 560 | 1 | |
| R3029 | ERJ3GEYG471 | M. RESISTOR CH 1/16W 470 | 1 | |
| R3030 | ERJ3GEYJ333 | M. RESISTOR CH 1/16W 33K | 1 | |
| R3033 | VRE0071E153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R3034 | VRE0071E203 | M. RESISTOR CH 1/10W 20K | 1 | |
| R3035 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R3036 | ERJ3GEYJ105 | M. RESISTOR CH 1/16W 1M | 1 | |
| R3037 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3051 | ERJ3GEYG471 | M. RESISTOR CH 1/16W 470 | 1 | |
| R3052 | ERJ3GEYJ333 | M. RESISTOR CH 1/16W 33K | 1 | |
| R3055, 56 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 2 | |
| R3057 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R3058 | ERJ3GEYJ105 | M. RESISTOR CH 1/16W 1M | 1 | |
| R3059 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3060 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 1 | |
| R3061 | VRE0071E622 | M. RESISTOR CH 1/10W 6. 2K | 1 | |
| R3062 | ERJ3GEYJ122 | M. RESISTOR CH 1/16W 1. 2K | 1 | |
| R3063 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 1 | |
| R3064 | VRE0071E183 | M. RESISTOR CH 1/10W 18K | 1 | |
| R3066 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R3067 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R3068 | ERJ3GEYJ105 | M. RESISTOR CH 1/16W 1M | 1 | |
| R3071 | VRE0071E222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R3072 | VRE0071E223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R3073 | VRE0071E751 | M. RESISTOR CH 1/10W 750 | 1 | |
| R3074 | VRE0071E472 | M. RESISTOR CH 1/10W 4. 7K | 1 | |
| R3075 | VRE0071E821 | M. RESISTOR CH 1/10W 820 | 1 | |
| R3076 | VRE0071E152 | M. RESISTOR CH 1/10W 1. 5K | 1 | |
| R3077 | ERJ3GEYJ561 | M. RESISTOR CH 1/16W 560 | 1 | |
| R3078 | ERJ3GEYG822 | M. RESISTOR CH1/16W 8. 2K | 1 | |
| R3079 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R3080 | ERJ3GEYJ681 | M. RESISTOR CH 1/16W 680 | 1 | |
| R3081 | ERJ3GEYJ823 | M. RESISTOR CH 1/16W 82K | 1 | |
| R3082 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 1 | |
| R3083 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R3084 | ERJ3GEYJ105 | M. RESISTOR CH 1/16W 1M | 1 | |
| R3085 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3086 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R3087 | ERJ3GEYJ183 | M. RESISTOR CH 1/16W 18K | 1 | |
| R3088 | ERJ3GEYJ561 | M. RESISTOR CH 1/16W 560 | 1 | |
| R3089 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3091 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R3092 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3094, 95 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R3097 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3099, 00 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R3103 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 1 | |
| R3104 | VRE0071E472 | M. RESISTOR CH 1/10W 4. 7K | 1 | |
| R3105 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3106 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R3107 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3108 | VRE0071E561 | M. RESISTOR CH 1/16W 560 | 1 | |
| R3109 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3112 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3114 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3115 | VRE0071E561 | M. RESISTOR CH 1/16W 560 | 1 | |
| R3117, 18 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R3119 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R3120, 21 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R3131 | VRE0071E202 | M. RESISTOR CH 1/10W 2K | 1 | |
| R3132 | VRE0071E243 | M. RESISTOR CH 1/10W 24K | 1 | |
| R3133 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 1 | |
| R3134 | VRE0071E221 | M. RESISTOR CH 1/10W 220 | 1 | |
| R3135 | ERJ3GEYJ562 | M. RESISTOR CH 1/16W 5. 6K | 1 | |
| R3136 | ERJ3GEYJ272 | M. RESISTOR CH 1/16W 2. 7K | 1 | |
| R3137 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R3138 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R3139, 40 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 2 | |
| R3141 | ERJ3GEYJ821 | M. RESISTOR CH 1/16W 820 | 1 | |
| R3142 | ERJ3GEYG471 | M. RESISTOR CH 1/16W 470 | 1 | |
| R3143 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R3144 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3145 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R3146 | ERJ3GEYJ100 | M. RESISTOR CH 1/16W 10 | 1 | |
| R3147, 48 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R3150 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3153 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3156, 57 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R3159 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3164 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 1 | |
| R3165 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3166 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3167 | ERJ3GEYJ684 | M. RESISTOR CH 1/16W 680K | 1 | |
| R3168 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R3171 | ERJ3GEYJ823 | M. RESISTOR CH 1/16W 82K | 1 | |
| R3181 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3182, 83 | ERJ3GEYJ221 | M. RESISTOR CH 1/16W 220 | 2 | |
| R3184 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R3197 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R3198, 99 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 2 | |
| | | | | |
| TG3001, 02 | EYF6CU | TEST POINT | 2 | |
| | | | | |
| VR1-R3 | VRV0113B202 | V. RESISTOR 2K | 3 | |
| VR3002 | EVM7JGA00B14 | V. RESISTOR 10K | 1 | |
| VR3005 | EVM7JGA00B53 | V. RESISTOR 5K | 1 | |
| VR3006 | EVM7JGA00B23 | V. RESISTOR 2K | 1 | |
| VR3007 | EVM7JGA00B53 | V. RESISTOR 5K | 1 | |
| VR3011, 12 | EVM7JGA00B14 | V. RESISTOR 10K | 2 | |
| VR3013-15 | VRV0161B102 | V. RESISTOR 1K | 3 | |
| | | | | |
| X3001 | VSX0687 | CRYSTAL OSCILLATOR | 1 | |
| X3002 | VSX0677 | CRYSTAL OSCILLATOR | 1 | |
| X3003 | VSX0270 | CRYSTAL OSCILLATOR | 1 | |
| X3004 | VSX0689 | CRYSTAL OSCILLATOR | 1 | |
| | | | | |
| | | MISCELLANEOUS | | |
| | | | | |
| | XSN2+6 | SCREW | 2 | |

VEP03D53A

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| ■ | VEP03D53A | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | VIDEO IF | | |
| | | | | |
| | | | | |
| | | | | |
| C7, C8 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C10-12 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C13 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 1 | |
| C14 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C15 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 1 | |
| C18 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C19 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 1 | |
| C26 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C27 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 1 | |
| C31-33 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C34 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 1 | |
| C55 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 1 | |
| C57 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C59 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C64 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C65 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 1 | |
| C87 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C89 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C111 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C112 | ECUX1H270JCV | C. CAPACITOR CH 50V 27P | 1 | |
| C113 | ECUX1H332KBV | C. CAPACITOR CH 50V 3300P | 1 | |
| C114, 15 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 2 | |
| C124, 25 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 2 | |
| C130, 31 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 2 | |
| C132 | ECUX1H390JCV | C. CAPACITOR CH 50V 39P | 1 | |
| C133 | ECUX1H070DCV | C. CAPACITOR CH 50V 7P | 1 | |
| C134 | ECUX1H101JCV | C. CAPACITOR CH 50V 100P | 1 | |
| C135 | ECUX1H220JCV | C. CAPACITOR CH 50V 22P | 1 | |
| C136 | ECUX1H270JCV | C. CAPACITOR CH 50V 27P | 1 | |
| C137 | ECUX1H470JCV | C. CAPACITOR CH 50V 47P | 1 | |
| C141 | ECUX1H470JCV | C. CAPACITOR CH 50V 47P | 1 | |
| C142 | ECST1CC336Z | T. CAPACITOR CH 16V 33U | 1 | |
| C143 | ECUX1H560JCV | C. CAPACITOR CH 50V 56P | 1 | |
| C145, 46 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 2 | |
| C165, 66 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 2 | |
| C167 | ECUX1H390JCV | C. CAPACITOR CH 50V 39P | 1 | |
| C168 | ECUX1H070DCV | C. CAPACITOR CH 50V 7P | 1 | |
| C169 | ECUX1H101JCV | C. CAPACITOR CH 50V 100P | 1 | |
| C170 | ECUX1H220JCV | C. CAPACITOR CH 50V 22P | 1 | |
| C171 | ECUX1H270JCV | C. CAPACITOR CH 50V 27P | 1 | |
| C172 | ECUX1H470JCV | C. CAPACITOR CH 50V 47P | 1 | |
| C173 | ECST1CC336Z | T. CAPACITOR CH 16V 33U | 1 | |
| C174 | ECUX1H560JCV | C. CAPACITOR CH 50V 56P | 1 | |
| C176, 77 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 2 | |
| C202 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 1 | |
| C206 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C207 | ECUM1H680JCN | C. CAPACITOR CH 50V 68P | 1 | |
| C208 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C216 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C217 | ECST1CY225Z | T. CAPACITOR CH 16V 2. 2U | 1 | |
| C218 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 1 | |
| C219 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C220 | ECST1CC336Z | T. CAPACITOR CH 16V 33U | 1 | |
| C221 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C223 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C224 | ECST1CY225Z | T. CAPACITOR CH 16V 2. 2U | 1 | |
| C225 | ECEV0JN100Q | E. CAPACITOR CH6. 3V 10U | 1 | |
| C226 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C227 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C228 | ECST1CC336Z | T. CAPACITOR CH 16V 33U | 1 | |
| C229 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C230 | ECST1CY225Z | T. CAPACITOR CH 16V 2. 2U | 1 | |
| C231 | ECEV0JN100Q | E. CAPACITOR CH6. 3V 10U | 1 | |
| C232 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C233 | ECST1CC336Z | T. CAPACITOR CH 16V 33U | 1 | |
| C236-38 | ECUX1H101JCV | C. CAPACITOR CH 50V 100P | 3 | |
| C242 | ECUM1C473KBV | C. CAPACITOR CH 16V 0. 047U | 1 | |
| C244-46 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 3 | |
| C247 | ECUX1H102JV | C. CAPACITOR CH 50V 1000P | 1 | |
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| | | | | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| C263 | ECST1CC336Z | T. CAPACITOR CH 16V 33U | 1 | |
| C264 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C265 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 1 | |
| C266 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C268 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C269, 70 | ECUX1H102JV | C. CAPACITOR CH 50V 1000P | 2 | |
| C272 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C273 | ECUX1H180JCV | C. CAPACITOR CH 50V 18P | 1 | |
| C274 | ECUX1H070DCV | C. CAPACITOR CH 50V 7P | 1 | |
| C275 | ECUX1H820JCV | C. CAPACITOR CH 50V 82P | 1 | |
| C276 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C279 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C301-05 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 5 | |
| C307-09 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 3 | |
| C403, 04 | VCK0152 | C. CAPACITOR | 2 | |
| C405 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C406 | ECST1CC336Z | T. CAPACITOR CH 16V 33U | 1 | |
| C407 | VCK0151 | C. CAPACITOR | 1 | |
| C408, 09 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 2 | |
| C410 | VCK0151 | C. CAPACITOR | 1 | |
| C411-13 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 3 | |
| C414 | VCK0151 | C. CAPACITOR | 1 | |
| C415-17 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 3 | |
| C602 | ECUX1H270JCV | C. CAPACITOR CH 50V 27P | 1 | |
| C605, 06 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 2 | |
| C608 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C609 | ECUX1H181JCV | C. CAPACITOR CH 50V 180P | 1 | |
| C610 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 1 | |
| C611 | ECUX1H390JCV | C. CAPACITOR CH 50V 39P | 1 | |
| C612 | ECUX1H070DCV | C. CAPACITOR CH 50V 7P | 1 | |
| C613 | ECUX1H101JCV | C. CAPACITOR CH 50V 100P | 1 | |
| C614 | ECUX1H220JCV | C. CAPACITOR CH 50V 22P | 1 | |
| C615 | ECUX1H270JCV | C. CAPACITOR CH 50V 27P | 1 | |
| C616 | ECUX1H470JCV | C. CAPACITOR CH 50V 47P | 1 | |
| C617 | ECST1CC336Z | T. CAPACITOR CH 16V 33U | 1 | |
| C618 | ECUX1H560JCV | C. CAPACITOR CH 50V 56P | 1 | |
| C620 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C623 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C624 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 1 | |
| C625 | ECUX1H390JCV | C. CAPACITOR CH 50V 39P | 1 | |
| C626 | ECUX1H070DCV | C. CAPACITOR CH 50V 7P | 1 | |
| C627 | ECUX1H101JCV | C. CAPACITOR CH 50V 100P | 1 | |
| C628 | ECUX1H220JCV | C. CAPACITOR CH 50V 22P | 1 | |
| C629 | ECUX1H270JCV | C. CAPACITOR CH 50V 27P | 1 | |
| C630 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C631 | ECUX1H470JCV | C. CAPACITOR CH 50V 47P | 1 | |
| C632 | ECST1CC336Z | T. CAPACITOR CH 16V 33U | 1 | |
| C633 | ECUX1H560JCV | C. CAPACITOR CH 50V 56P | 1 | |
| C635, 36 | ECUX1H220JCV | C. CAPACITOR CH 50V 22P | 2 | |
| C637 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C638 | ECUX1H220JCV | C. CAPACITOR CH 50V 22P | 1 | |
| C639 | ECUX1H100DCV | C. CAPACITOR CH 50V 10P | 1 | |
| C640 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C641 | ECUX1H151JCV | C. CAPACITOR CH 50V 150P | 1 | |
| C642 | ECUX1H561JCV | C. CAPACITOR CH 50V 560P | 1 | |
| C643, 44 | ECST1CC336Z | T. CAPACITOR CH 16V 33U | 2 | |
| C645, 46 | ECUM1C105KBM | C. CAPACITOR CH 16V 1U | 2 | |
| C647 | ECUM1E473KBN | C. CAPACITOR CH 25V 0. 047U | 1 | |
| C648, 49 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C650 | ECUM1E473KBN | C. CAPACITOR CH 25V 0. 047U | 1 | |
| C651 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C652 | ECST1CC336Z | T. CAPACITOR CH 16V 33U | 1 | |
| C653 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C654 | ECUM1E473KBN | C. CAPACITOR CH 25V 0. 047U | 1 | |
| C655 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C656 | ECST1CC336Z | T. CAPACITOR CH 16V 33U | 1 | |
| C657 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C658 | ECUX1H101JCV | C. CAPACITOR CH 50V 100P | 1 | |
| C664 | ECUX1H150JCV | C. CAPACITOR CH 50V 15P | 1 | |
| C667 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C668 | ECST1CC336Z | T. CAPACITOR CH 16V 33U | 1 | |
| C670 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 1 | |
| C672 | ECUX1H220JCV | C. CAPACITOR CH 50V 22P | 1 | |
| C673 | ECUX1H180JCV | C. CAPACITOR CH 50V 18P | 1 | |
| C674 | ECUX1H020CCV | C. CAPACITOR CH 50V 2P | 1 | |
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VEP03D53A

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| D201 | MA142K | DIODE | 1 | |
| | | | | |
| DL602 | VLD0265 | DELAY | 1 | |
| | | | | |
| FL2-L4 | VLF0941C223 | FILTER | 3 | |
| FL101 | VLF1179 | FILTER | 1 | |
| FL601 | VLF1179 | FILTER | 1 | |
| FL602 | VLF1337 | FILTER | 1 | |
| | | | | |
| IC5 | XC62DN5002P | IC | 1 | |
| IC6 | XC62AP5002P | IC | 1 | |
| IC8 | XC62DN5002P | IC | 1 | |
| IC9 | XC62AP3002P | IC | 1 | |
| IC11 | TC7W04FU | IC | 1 | |
| IC101, 02 | TC4W53FU | IC | 2 | |
| IC103 | AD817AR | IC | 1 | |
| IC104 | TC4W53FU | IC | 1 | |
| IC105 | AD826AR | IC | 1 | |
| IC201 | EL4583CS | IC | 1 | |
| IC202 | TC7W14FU | IC | 1 | |
| IC207, 08 | CXD1176Q | IC | 2 | |
| IC209 | XC62AP5002P | IC | 1 | |
| IC212 | CXD1176Q | IC | 1 | |
| IC301 | T163G26-1022 | IC | 1 | |
| IC304 | TC7SH04FU | IC | 1 | |
| IC305 | TCVHC74FS | IC | 1 | |
| IC306 | TC4W53FU | IC | 1 | |
| IC402 | MN657021F | IC | 1 | |
| IC403 | TC7S04FU | IC | 1 | |
| IC601 | TC7SH08FU | IC | 1 | |
| IC602 | AD817AR | IC | 1 | |
| IC603 | AD826AR | IC | 1 | |
| IC604 | M51272FP | IC | 1 | |
| IC608-10 | TC7S08FU | IC | 3 | |
| IC611 | XC62AP5002P | IC | 1 | |
| | | | | |
| L102 | VLQ0426J3R3 | COIL 3. 3UH | 1 | |
| L104, 05 | VLQ0319K101 | COIL 100UH | 2 | |
| L106 | VLQ0426J820 | COIL 82UH | 1 | |
| L107 | VLQ0426J680 | COIL 68UH | 1 | |
| L110 | VLQ0426J820 | COIL 82UH | 1 | |
| L111 | VLQ0426J680 | COIL 68UH | 1 | |
| L204-06 | VLQ0319K101 | COIL 100UH | 3 | |
| L262 | VLQ0319K101 | COIL 100UH | 1 | |
| L264 | VLQ0163J221 | COIL 220UH | 1 | |
| L300-07 | VLP0155 | COIL | 8 | |
| L309-19 | VLP0155 | COIL | 11 | |
| L402 | VLQ0464K6R8 | COIL 6. 8UH | 1 | |
| L602 | VLQ0163J390 | COIL 39UH | 1 | |
| L603 | VLQ0319K101 | COIL 100UH | 1 | |
| L604 | VLQ0426J820 | COIL 82UH | 1 | |
| L605 | VLQ0426J680 | COIL 68UH | 1 | |
| L607 | VLQ0319K101 | COIL 100UH | 1 | |
| L608 | VLQ0426J820 | COIL 82UH | 1 | |
| L609 | VLQ0426J680 | COIL 68UH | 1 | |
| L611, 12 | VLQ0426J470 | COIL 47UH | 2 | |
| L613 | VLQ0426J180 | COIL 18UH | 1 | |
| L614 | VLQ0426J560 | COIL 56UH | 1 | |
| L618 | VLQ0319K101 | COIL 100UH | 1 | |
| L619 | VLQ0426J220 | COIL 22UH | 1 | |
| | | | | |
| P1 | VJP3657 | CONNECTOR (MALE) | 1 | |
| P2 | VJP3819A100 | CONNECTOR (MALE) | 1 | |
| P101 | VJP3358C012 | CONNECTOR (MALE) | 1 | |
| | | | | |
| Q87 | 2SB1114 | TRANSISTOR | 1 | |
| Q91 | 2SD1280-S | TRANSISTOR | 1 | |
| Q92 | 2SB1218A-R | TRANSISTOR | 1 | |
| Q101 | 2SB1218A-R | TRANSISTOR | 1 | |
| Q102 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q103 | 2SB1218A-R | TRANSISTOR | 1 | |
| Q107 | 2SB1218A-R | TRANSISTOR | 1 | |
| Q108 | 2SA1532-B | TRANSISTOR | 1 | |
| Q109 | 2SB1218A-R | TRANSISTOR | 1 | |
| | | | | |
| | | | | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| Q113 | 2SB1218A-R | TRANSISTOR | 1 | |
| Q114, 15 | 2SA1532-B | TRANSISTOR | 2 | |
| Q116 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q201 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q601-06 | 2SD1819A-R | TRANSISTOR | 6 | |
| Q607 | 2SA1532-B | TRANSISTOR | 1 | |
| Q608 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q609 | 2SA1532-B | TRANSISTOR | 1 | |
| Q610-12 | 2SB1218A-R | TRANSISTOR | 3 | |
| Q613-15 | 2SD1819A-R | TRANSISTOR | 3 | |
| Q616 | 2SB1218A-R | TRANSISTOR | 1 | |
| | | | | |
| QR88 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| QR301 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| | | | | |
| R14 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R21 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R83 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R84 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 1 | |
| R91 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R92 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R99 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R102 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R103 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R105 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R107 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R108, 09 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 2 | |
| R110 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R111 | ERJ3GEYJ681 | M. RESISTOR CH 1/16W 680 | 1 | |
| R112 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R113 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R114 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R115 | ERJ3GEYJ122 | M. RESISTOR CH 1/16W 1. 2K | 1 | |
| R116 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R117 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R120 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R121-23 | VRE0071E750 | M. RESISTOR CH 1/10W 75 | 3 | |
| R125 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R126 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R127, 28 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 2 | |
| R129 | ERJ3GEYG471 | M. RESISTOR CH 1/16W 470 | 1 | |
| R130 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R131, 32 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R133 | ERJ3GEYJ331 | M. RESISTOR CH 1/16W 330 | 1 | |
| R134 | ERJ3GEYJ272 | M. RESISTOR CH 1/16W 2. 7K | 1 | |
| R136 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R137 | ERJ3GEYJ122 | M. RESISTOR CH 1/16W 1. 2K | 1 | |
| R138 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R147 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R149 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R150, 51 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 2 | |
| R152 | ERJ3GEYG471 | M. RESISTOR CH 1/16W 470 | 1 | |
| R153 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R154, 55 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R156 | ERJ3GEYJ331 | M. RESISTOR CH 1/16W 330 | 1 | |
| R157 | ERJ3GEYJ272 | M. RESISTOR CH 1/16W 2. 7K | 1 | |
| R160 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R163 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R166 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R179 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R184 | ERJ3GEYJ562 | M. RESISTOR CH 1/16W 5. 6K | 1 | |
| R185, 86 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 2 | |
| R187 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R188 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R203 | ERJ3GEYJ823 | M. RESISTOR CH 1/16W 82K | 1 | |
| R204 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R205 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R206 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R208 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R209 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R211 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R213 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R214 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R216 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R217 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| | | | | |
| | | | | |

VEP03D53A

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R218 | ERJ3GEYJ750 | M. RESISTOR CH 1/16W 75 | 1 | |
| R219 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R223 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R225 | ERJ3GEYJ221 | M. RESISTOR CH 1/16W 220 | 1 | |
| R226, 27 | ERJ6GEYJ335 | M. RESISTOR CH 1/10W 3. 3M | 2 | |
| R228 | ERJ3GEYJ750 | M. RESISTOR CH 1/16W 75 | 1 | |
| R229 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R231 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R232 | VRE006607103 | M. RESISTOR CH 1/10W 10K | 1 | |
| R234, 35 | ERJ6GEYJ335 | M. RESISTOR CH 1/10W 3. 3M | 2 | |
| R236 | ERJ3GEYJ750 | M. RESISTOR CH 1/16W 75 | 1 | |
| R237 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R239 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R241 | VRE006607103 | M. RESISTOR CH 1/10W 10K | 1 | |
| R242, 43 | ERJ6GEYJ335 | M. RESISTOR CH 1/10W 3. 3M | 2 | |
| R244 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R268 | ERJ3GEYJ684 | M. RESISTOR CH 1/16W 680K | 1 | |
| R272 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R273 | ERJ3GEYJ221 | M. RESISTOR CH 1/16W 220 | 1 | |
| R303 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R307-09 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 3 | |
| R311 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R313-15 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 3 | |
| R316 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R320, 21 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 2 | |
| R323 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R324, 25 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 2 | |
| R326, 27 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R328 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R329 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R330 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R332 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R334 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R335 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R336 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R401-08 | EXB24V151JX | COMBI. R-R | 8 | |
| R409 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R410 | ERJ3GEYJ562 | M. RESISTOR CH 1/16W 5. 6K | 1 | |
| R411 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R412 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R413 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R414-16 | ERJ3GEYJ391 | M. RESISTOR CH 1/16W 390 | 3 | |
| R417 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 1 | |
| R418 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R426, 27 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R502 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R505 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R601 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R603 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R605 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R606 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R607 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R608 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R609 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R610 | ERJ3GEYJ562 | M. RESISTOR CH 1/16W 5. 6K | 1 | |
| R611 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R612 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R614, 15 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 2 | |
| R616 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R619 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R620 | VRT014116250 | THERMISTOR | 1 | |
| R622 | ERJ3GEYJ122 | M. RESISTOR CH 1/16W 1. 2K | 1 | |
| R623 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R624 | ERJ3GEYJ681 | M. RESISTOR CH 1/16W 680 | 1 | |
| R625 | ERJ3GEYG471 | M. RESISTOR CH 1/16W 470 | 1 | |
| R626 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 1 | |
| R627 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R628, 29 | ERJ3GEYG471 | M. RESISTOR CH 1/16W 470 | 2 | |
| R631 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R632 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R633, 34 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 2 | |
| R635, 36 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 2 | |
| R637 | ERJ3GEYJ821 | M. RESISTOR CH 1/16W 820 | 1 | |
| R638 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R639, 40 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R641 | ERJ3GEYJ331 | M. RESISTOR CH 1/16W 330 | 1 | |
| R642 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R645 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R646, 47 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 2 | |
| R648, 49 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 2 | |
| R650 | ERJ3GEYJ821 | M. RESISTOR CH 1/16W 820 | 1 | |
| R651 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R652, 53 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R654 | ERJ3GEYJ331 | M. RESISTOR CH 1/16W 330 | 1 | |
| R655 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R656 | VRE0071E472 | M. RESISTOR CH 1/10W 4. 7K | 1 | |
| R658 | VRE0071E102 | M. RESISTOR CH1/16W 1K | 1 | |
| R660 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R661 | VRE0071E472 | M. RESISTOR CH 1/10W 4. 7K | 1 | |
| R663 | VRE0071E102 | M. RESISTOR CH1/16W 1K | 1 | |
| R665 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R666 | VRE0071E471 | M. RESISTOR CH 1/10W 470 | 1 | |
| R667 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R668, 69 | VRE0071E241 | M. RESISTOR CH 1/10W 240 | 2 | |
| R671 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R675, 76 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 2 | |
| R677 | VRE0071E273 | M. RESISTOR CH 1/10W 27K | 1 | |
| R678, 79 | VRE0071E183 | M. RESISTOR CH 1/10W 18K | 2 | |
| R680 | VRE0071E273 | M. RESISTOR CH 1/10W 27K | 1 | |
| R681 | VRE0071E221 | M. RESISTOR CH 1/10W 220 | 1 | |
| R682 | VRE0071E102 | M. RESISTOR CH1/16W 1K | 1 | |
| R683 | VRE0071E121 | M. RESISTOR CH 1/10W 120 | 1 | |
| R684 | VRE0071E221 | M. RESISTOR CH 1/10W 220 | 1 | |
| R685 | VRE0071E332 | M. RESISTOR CH1/16W 3. 3K | 1 | |
| R686 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R687 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R688 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R689 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R690 | ERJ3GEYJ105 | M. RESISTOR CH 1/16W 1M | 1 | |
| R693 | ERJ3GEYJ330 | M. RESISTOR CH 1/16W 33 | 1 | |
| R694 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R695 | VRT014182150 | THERMISTOR | 1 | |
| R696, 97 | VRE0071E132 | M. RESISTOR CH 1/10W 1. 3K | 2 | |
| R698, 99 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R700 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R706, 07 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R801, 02 | VRE0034E181 | M. RESISTOR CH 1/10W 180 | 2 | |
| | | | | |
| TG1 | EYF6CU | TEST POINT | 1 | |
| | | | | |
| VC601 | VCV0047 | TRIMMER | 1 | |
| | | | | |
| VR104 | EVM7JGA00B23 | V. RESISTOR 2K | 1 | |
| VR107, 08 | EVM7JGA00B23 | V. RESISTOR 2K | 2 | |
| VR111, 12 | EVM7JGA00B23 | V. RESISTOR 2K | 2 | |
| VR201 | EVM7JGA00B14 | V. RESISTOR 10K | 1 | |
| VR601 | EVM7JGA00B23 | V. RESISTOR 2K | 1 | |
| VR602 | EVM7JGA00B53 | V. RESISTOR 5K | 1 | |
| VR603 | EVM7JGA00B13 | V. RESISTOR 1K | 1 | |
| VR604 | EVM7JGA00B22 | V. RESISTOR 200 | 1 | |
| VR605 | EVM7JGA00B13 | V. RESISTOR 1K | 1 | |
| VR606 | EVM7JGA00B52 | V. RESISTOR 500 | 1 | |
| VR607 | EVM7JGA00B14 | V. RESISTOR 10K | 1 | |
| VR608 | EVM7JGA00B53 | V. RESISTOR 5K | 1 | |
| VR609, 10 | EVM7JGA00B23 | V. RESISTOR 2K | 2 | |
| | | | | |
| | | MISCELLANEOUS | | |
| | | | | |
| | XSN2+6 | SCREW | 2 | |

## VEP03D84A

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| ■ | VEP03D84A | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | VIDEO IF SUB | | |
| C2, C3 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 2 | |
| C6 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C20 | ECUX1H390JCV | C. CAPACITOR CH 50V 39P | 1 | |
| C21-25 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 5 | |
| C28 | ECUX1H390JCV | C. CAPACITOR CH 50V 39P | 1 | |
| C203 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C204 | ECST1CC336Z | T. CAPACITOR CH 16V 33U | 1 | |
| C209-11 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 3 | |
| C212 | ECUM1C474KBM | C. CAPACITOR CH 16V 0. 47U | 1 | |
| C213 | ECUX1H102JV | C. CAPACITOR CH 50V 1000P | 1 | |
| C234, 35 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 2 | |
| C243 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C250 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C251 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 1 | |
| C252 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C253 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 1 | |
| C254 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C280 | ECST1CC336Z | T. CAPACITOR CH 16V 33U | 1 | |
| | | | | |
| D203, 04 | MA704 | DIODE | 2 | |
| | | | | |
| IC1 | T160G41-1437 | IC | 1 | |
| IC3 | CG25123-5106 | IC | 1 | |
| IC4 | CY7C19920ZC | IC | 1 | |
| IC7 | TC7S04FU | IC | 1 | |
| IC10 | CY7C19920ZC | IC | 1 | |
| IC203 | TCVHC04FS | IC | 1 | |
| IC205 | TC7W125FU | IC | 1 | |
| IC206 | NJM062M | IC | 1 | |
| IC211 | TC7SH00FU | IC | 1 | |
| IC213 | XC62AP5002P | IC | 1 | |
| | | | | |
| L201-03 | VLQ0319K101 | COIL 100UH | 3 | |
| L207 | VLP0155 | COIL | 1 | |
| L208 | VLQ0319K101 | COIL 100UH | 1 | |
| | | | | |
| P3 | VJS3819E100 | CONNECTOR (FEMALE) | 1 | |
| | | | | |
| R7, R8 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R9 | ERJ3GEYJ221 | M. RESISTOR CH 1/16W 220 | 1 | |
| R10 | VRE0071E111 | M. RESISTOR CH 1/10W 110 | 1 | |
| R11 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R17 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R26-33 | EXB24V151JX | COMBI. R-R | 8 | |
| R35-42 | EXB24V151JX | COMBI. R-R | 8 | |
| R46, 47 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R48, 49 | ERJ3GEYJ151 | M. RESISTOR CH 1/16W 150 | 2 | |
| R50-52 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 3 | |
| R207 | ERJ3GEYG471 | M. RESISTOR CH 1/16W 470 | 1 | |
| R220 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R221 | ERJ3GEYJ105 | M. RESISTOR CH 1/16W 1M | 1 | |
| R251 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R258 | ERJ3GEYJ105 | M. RESISTOR CH 1/16W 1M | 1 | |
| R260 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R274 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R276 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R278 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R280 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R282, 83 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R285 | ERJ3GEYJ333 | M. RESISTOR CH 1/16W 33K | 1 | |
| R286 | ERJ3GEYJ105 | M. RESISTOR CH 1/16W 1M | 1 | |
| R287 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R288 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| | | | | |
| X201 | VSX0677 | CRYSTAL OSCILLATOR | 1 | |

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| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| ■ | VEP06A22B | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | VTR SYSCON | | |
| | | | | |
| | | | | |
| | | | | |
| C6001 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C6002 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C6003 | ECEV1CV100Q | E. CAPACITOR CH 16V 10U | 1 | |
| C6004, 05 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C6006, 07 | ECUX1H330JCV | C. CAPACITOR CH 50V 33P | 2 | |
| C6008, 09 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C6010 | ECUX1H470JCV | C. CAPACITOR CH 50V 47P | 1 | |
| C6012-19 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 8 | |
| C6021, 22 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C6023 | ECUX1H120JCV | C. CAPACITOR CH 50V 12P | 1 | |
| C6101 | ECEV0JV470Q | E. CAPACITOR CH6. 3V 47U | 1 | |
| C6102 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C6103 | ECEV0JV470Q | E. CAPACITOR CH6. 3V 47U | 1 | |
| C6104-06 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C6201-09 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 9 | |
| C6210 | ECEV0JV470Q | E. CAPACITOR CH6. 3V 47U | 1 | |
| C6211 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C6213-17 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 5 | |
| C6801, 02 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C6803, 04 | ECUX1H100DCV | C. CAPACITOR CH 50V 10P | 2 | |
| C6805-07 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C6809 | ECUX1H270JCV | C. CAPACITOR CH 50V 27P | 1 | |
| C6810 | ECUX1H220JCV | C. CAPACITOR CH 50V 22P | 1 | |
| C6811 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C6812 | ECEV0JV470Q | E. CAPACITOR CH6. 3V 47U | 1 | |
| C6813, 14 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C6815 | ECUX1H102JV | C. CAPACITOR CH 50V 1000P | 1 | |
| C6816 | ECEV1CV470Q | E. CAPACITOR CH 16V 47U | 1 | |
| C6817 | ECEV1CV100Q | E. CAPACITOR CH 16V 10U | 1 | |
| C6818 | ECEV1CN100Q | E. CAPACITOR CH 16V 10U | 1 | |
| C6819 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C6820 | ECUM1C105ZFN | C. CAPACITOR CH 16V 1U | 1 | |
| C6821, 22 | ECEV1CN100Q | E. CAPACITOR CH 16V 10U | 2 | |
| | | | | |
| D6001 | MA151K | DIODE | 1 | |
| D6002-04 | MA728 | DIODE | 3 | |
| D6007-09 | MA728 | DIODE | 3 | |
| D6021 | MA151K | DIODE | 1 | |
| D6801 | MA143 | DIODE | 1 | |
| D6802 | MA8024 | DIODE | 1 | |
| | | | | |
| IC6001 | M37702S4AFP | IC | 1 | |
| IC6002 | MN13821-S | IC | 1 | |
| IC6003 | TC7W04F | IC | 1 | |
| IC6004 | TC7W32F | IC | 1 | |
| IC6005 | PC74HC75T | IC | 1 | |
| IC6006 | VS12334A | IC | 1 | |
| IC6007 | TC7W00F | IC | 1 | |
| IC6008 | MC74HC138AF | IC | 1 | |
| IC6009 | UPD6456T611Y | IC | 1 | |
| IC6010 | TC7W32F | IC | 1 | |
| IC6011, 12 | TC74ACT541F | IC | 2 | |
| IC6013 | TC7S32F | IC | 1 | |
| IC6101, 02 | TC74ACT541F | IC | 2 | |
| IC6201 | MB89363BPF | IC | 1 | |
| IC6202 | UPC393G2 | IC | 1 | |
| IC6801 | MN51040VPI | IC | 1 | |
| IC6802 | UPC393G2 | IC | 1 | |
| IC6803 | NJM4558M | IC | 1 | |
| | | | | |
| IF6006 | VJF1047 | IC SOCKET | 1 | |
| | | | | |
| IS6006 | VJS3427X032 | CONNECTOR (FEMALE) | 1 | |
| | | | | |
| L6001 | VLQ0319K100 | COIL 10UH | 1 | |
| L6002 | VLQ0163J270 | COIL 27UH | 1 | |
| L6101 | VLQ0319K101 | COIL 100UH | 1 | |
| L6102, 03 | VLQ0163J470 | COIL 47UH | 2 | |
| L6201 | VLQ0319K101 | COIL 100UH | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| L6801 | VLQ0163J470 | COIL 47UH | 1 | |
| L6802 | VLQ0319K101 | COIL 100UH | 1 | |
| | | | | |
| P6001 | VJP3657 | CONNECTOR (MALE) | 1 | |
| | | | | |
| Q6801 | 2SD1819A-R | TRANSISTOR | 1 | |
| | | | | |
| QR6001 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| QR6003 | UN5211 | TRANSISTOR-RESISTOR | 1 | |
| QR6004, 05 | UN5213 | TRANSISTOR-RESISTOR | 2 | |
| QR6201-04 | UN5114 | TRANSISTOR-RESISTOR | 4 | |
| QR6206 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| QR6207 | UN5114 | TRANSISTOR-RESISTOR | 1 | |
| QR6208, 09 | UN5213 | TRANSISTOR-RESISTOR | 2 | |
| | | | | |
| R6001 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R6002 | ERJ3GEYG471 | M. RESISTOR CH 1/16W 470 | 1 | |
| R6003 | ERJ3GEYJ683 | M. RESISTOR CH 1/16W 68K | 1 | |
| R6004 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R6005 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R6006 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R6007 | VRE0034E473 | M. RESISTOR CH 1/10W 47K | 1 | |
| R6008 | VRE0034E153 | M. RESISTOR CH 1/10W 15K | 1 | |
| R6009 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R6010 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R6011 | ERJ3GEYJ683 | M. RESISTOR CH 1/16W 68K | 1 | |
| R6012 | ERJ3GEYJ105 | M. RESISTOR CH 1/16W 1M | 1 | |
| R6013 | ERJ3GEYJ683 | M. RESISTOR CH 1/16W 68K | 1 | |
| R6014 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R6015 | ERJ3GEYJ221 | M. RESISTOR CH 1/16W 220 | 1 | |
| R6016, 17 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 2 | |
| R6019, 20 | ERJ3GEYJ683 | M. RESISTOR CH 1/16W 68K | 2 | |
| R6021 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R6022 | ERJ3GEYJ683 | M. RESISTOR CH 1/16W 68K | 1 | |
| R6023 | ERJ3GEYJ221 | M. RESISTOR CH 1/16W 220 | 1 | |
| R6025 | ERJ3GEYJ683 | M. RESISTOR CH 1/16W 68K | 1 | |
| R6026 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R6029 | ERJ3GEYJ683 | M. RESISTOR CH 1/16W 68K | 1 | |
| R6030-36 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 7 | |
| R6037-39 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 3 | |
| R6040-44 | ERJ3GEYJ683 | M. RESISTOR CH 1/16W 68K | 5 | |
| R6045, 46 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 2 | |
| R6047, 48 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 2 | |
| R6049 | ERJ3GEYJ221 | M. RESISTOR CH 1/16W 220 | 1 | |
| R6050 | ERJ3GEYJ683 | M. RESISTOR CH 1/16W 68K | 1 | |
| R6051, 52 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R6053 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 1 | |
| R6101-29 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 29 | |
| R6201-05 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 5 | |
| R6206-12 | ERJ3GEYJ683 | M. RESISTOR CH 1/16W 68K | 7 | |
| R6213-15 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 3 | |
| R6216 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R6217 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R6218, 19 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 2 | |
| R6220-24 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 5 | |
| R6225 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R6226-30 | ERJ3GEYJ683 | M. RESISTOR CH 1/16W 68K | 5 | |
| R6231, 32 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 2 | |
| R6233-36 | ERJ6GEYG271 | M. RESISTOR CH 1/10W 270 | 4 | |
| R6237 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R6238-41 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 4 | |
| R6243, 44 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R6246 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R6801 | ERJ3GEYJ105 | M. RESISTOR CH 1/16W 1M | 1 | |
| R6803, 04 | ERJ3GEYJ224 | M. RESISTOR CH 1/16W 220K | 2 | |
| R6805 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R6806 | ERJ3GEYJ123 | M. RESISTOR CH 1/16W 12K | 1 | |
| R6807 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R6808 | ERJ3GEYJ123 | M. RESISTOR CH 1/16W 12K | 1 | |
| R6809 | VRE0034E682 | M. RESISTOR CH 1/10W 6. 8K | 1 | |
| R6810 | VRE0034E912 | M. RESISTOR CH1/10W 9. 1K | 1 | |
| R6811 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R6812, 13 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 2 | |
| R6814 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R6816 | ERJ3GEYJ394 | M. RESISTOR CH 1/16W 390K | 1 | |

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| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R6817 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R6818 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R6819 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 1 | |
| R6820 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R6821 | ERJ3GEYJ561 | M. RESISTOR CH 1/16W 560 | 1 | |
| R6822 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R6823 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R6824 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R6826 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R6827, 28 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R6829 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R6839 | VRE0034E392 | M. RESISTOR CH1/10W 3. 9K | 1 | |
| R6840 | VRE0034E102 | M. RESISTOR CH1/10W 1K | 1 | |
| R6845 | ERJ3GEYJ561 | M. RESISTOR CH 1/16W 560 | 1 | |
| | | | | |
| SW6001 | VSS0342 | SWITCH | 1 | |
| | | | | |
| TG6001 | EYF6CU | TEST POINT | 1 | |
| | | | | |
| VC6001 | VCV0049 | TRIMMER | 1 | |
| | | | | |
| X6001 | VSX0465 | CRYSTAL OSCILLATOR | 1 | |
| X6801 | VSX0498 | CRYSTAL OSCILLATOR | 1 | |
| X6802 | VSX0615 | CRYSTAL OSCILLATOR | 1 | |
| | | | | |
| | | MISCELLANEOUS | | |
| | | | | |
| | XSN2+6 | SCREW | 2 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|

## VEP02437B

| Ref.No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| ■ | VEP02437B | P.C.BOARD W/COMPONENT | 1 | (RTL) |
| | | SERVO | | |
| | | | | |
| | | | | |
| | | | | |
| C20 | ECA1EFQ121 | E.CAPACITOR 25V 120U | 1 | |
| C24 | ECA1EFQ121 | E.CAPACITOR 25V 120U | 1 | |
| C45 | VCK0152 | C.CAPACITOR | 1 | |
| C53 | ECA1EFQ121 | E.CAPACITOR 25V 120U | 1 | |
| C55 | ECA1EFQ121 | E.CAPACITOR 25V 120U | 1 | |
| C60 | ECA1EFQ121 | E.CAPACITOR 25V 120U | 1 | |
| C64,65 | ECUM1C105KBM | C.CAPACITOR CH 16V 1U | 2 | |
| C66 | ECUX1H101JCV | C.CAPACITOR CH 50V 100P | 1 | |
| C67 | ECUX1H471JCV | C.CAPACITOR CH 50V 470P | 1 | |
| C69 | ECUX1H471JCV | C.CAPACITOR CH 50V 470P | 1 | |
| C78 | ECUM1C105KBM | C.CAPACITOR CH 16V 1U | 1 | |
| C100,01 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 2 | |
| C103 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C107 | ECUM1C105KBM | C.CAPACITOR CH 16V 1U | 1 | |
| C108 | ECUX1H101JCV | C.CAPACITOR CH 50V 100P | 1 | |
| C109 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C110 | ECEV1CV100Q | E.CAPACITOR CH 16V 10U | 1 | |
| C111 | ECUX1H122KBV | C.CAPACITOR CH 50V 1200P | 1 | |
| C113,14 | ECEV1CV470Q | E.CAPACITOR CH 16V 47U | 2 | |
| C115-17 | ECEV1EV330Q | E.CAPACITOR CH 25V 33U | 3 | |
| C119-21 | ECEV1CV100Q | E.CAPACITOR CH 16V 10U | 3 | |
| C123 | ECEV1CV100Q | E.CAPACITOR CH 16V 10U | 1 | |
| C124 | ECUX1H332KBV | C.CAPACITOR CH 50V 3300P | 1 | |
| C125 | ECEV1CV100Q | E.CAPACITOR CH 16V 10U | 1 | |
| C126 | ECUX1H101JCV | C.CAPACITOR CH 50V 100P | 1 | |
| C127 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 1 | |
| C128 | ECUX1H101JCV | C.CAPACITOR CH 50V 100P | 1 | |
| C129 | ECUX1H182KBV | C.CAPACITOR CH 50V 1800P | 1 | |
| C130 | ECUX1H100DCV | C.CAPACITOR CH 50V 10P | 1 | |
| C133 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C134 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C135 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C137,38 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 2 | |
| C139 | ECEV1EV220Q | E.CAPACITOR CH 25V 22U | 1 | |
| C140,41 | ECUM1C105KBM | C.CAPACITOR CH 16V 1U | 2 | |
| C143 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C144,45 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 2 | |
| C204 | ECEV1CV100Q | E.CAPACITOR CH 16V 10U | 1 | |
| C206,07 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 2 | |
| C208 | ECEV1CV100Q | E.CAPACITOR CH 16V 10U | 1 | |
| C209 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 1 | |
| C213,14 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 2 | |
| C215 | ECUM1C105KBM | C.CAPACITOR CH 16V 1U | 1 | |
| C222 | ECUX1H470JCV | C.CAPACITOR CH 50V 47P | 1 | |
| C225 | ECUM1C105KBM | C.CAPACITOR CH 16V 1U | 1 | |
| C227 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C228-30 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 3 | |
| C231-33 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 3 | |
| C234-36 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 3 | |
| C237 | ECUX1H470JCV | C.CAPACITOR CH 50V 47P | 1 | |
| C238 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C239 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C243 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C244 | ECUM1C105KBM | C.CAPACITOR CH 16V 1U | 1 | |
| C245,46 | ECUX1H332KBV | C.CAPACITOR CH 50V 3300P | 2 | |
| C247 | ECEV1CV100Q | E.CAPACITOR CH 16V 10U | 1 | |
| C250,51 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 2 | |
| C252 | ECEV1CV100Q | E.CAPACITOR CH 16V 10U | 1 | |
| C253-56 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 4 | |
| C257,58 | ECEV1CV100Q | E.CAPACITOR CH 16V 10U | 2 | |
| C267,68 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 2 | |
| C269 | ECUM1C105KBM | C.CAPACITOR CH 16V 1U | 1 | |
| C270 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C304,05 | ECA1EFQ121 | E.CAPACITOR 25V 120U | 2 | |
| C307,08 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 2 | |
| C309 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 1 | |
| C310 | VCC0037F432 | C.CAPACITOR 432P | 1 | |
| C311 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 1 | |
| C312 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| | | | | |
| | | | | |

| Ref.No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| C318,19 | ECA1EFQ121 | E.CAPACITOR 25V 120U | 2 | |
| C321 | ECUM1H333KBN | C.CAPACITOR CH 50V 0.033U | 1 | |
| C322 | ECUM1C105KBM | C.CAPACITOR CH 16V 1U | 1 | |
| C323 | ECEV1EV4R7Q | E.CAPACITOR CH 25V 4.7U | 1 | |
| C324,25 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 2 | |
| C326 | ECUM1C105KBM | C.CAPACITOR CH 16V 1U | 1 | |
| C327-29 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 3 | |
| C330 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C331 | ECUM1H333KBN | C.CAPACITOR CH 50V 0.033U | 1 | |
| C332 | ECUM1C105KBM | C.CAPACITOR CH 16V 1U | 1 | |
| C333 | ECEV1EV4R7Q | E.CAPACITOR CH 25V 4.7U | 1 | |
| C334,35 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 2 | |
| C336 | ECUM1C105KBM | C.CAPACITOR CH 16V 1U | 1 | |
| C337-39 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 3 | |
| C340-42 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 3 | |
| C343-46 | ECEV1EV4R7Q | E.CAPACITOR CH 25V 4.7U | 4 | |
| C349 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 1 | |
| C351 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 1 | |
| C353,54 | ECUM1H333KBN | C.CAPACITOR CH 50V 0.033U | 2 | |
| C357-59 | ECUM1C105KBM | C.CAPACITOR CH 16V 1U | 3 | |
| C401-04 | ECUM1C105KBM | C.CAPACITOR CH 16V 1U | 4 | |
| C407-10 | ECUX1H102JV | C.CAPACITOR CH 50V 1000P | 4 | |
| C411-13 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 3 | |
| C414-16 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 3 | |
| C418 | ECEV1HV3R3Q | E.CAPACITOR CH 50V 3.3U | 1 | |
| C419 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C420 | ECEV1HV3R3Q | E.CAPACITOR CH 50V 3.3U | 1 | |
| C422-25 | ECUX1H101JCV | C.CAPACITOR CH 50V 100P | 4 | |
| C430 | VCK0152 | C.CAPACITOR | 1 | |
| C432 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C433 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 1 | |
| C434 | ECEV1HV3R3Q | E.CAPACITOR CH 50V 3.3U | 1 | |
| C435 | ECEV1CV100Q | E.CAPACITOR CH 16V 10U | 1 | |
| C503 | ECUX1H102JV | C.CAPACITOR CH 50V 1000P | 1 | |
| C504 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C506 | VCK0152 | C.CAPACITOR | 1 | |
| C507 | ECEV1HV3R3Q | E.CAPACITOR CH 50V 3.3U | 1 | |
| C508-11 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 4 | |
| C514 | ECUM1C105KBM | C.CAPACITOR CH 16V 1U | 1 | |
| C515 | ECEV1HV3R3Q | E.CAPACITOR CH 50V 3.3U | 1 | |
| C517 | ECEV1HV3R3Q | E.CAPACITOR CH 50V 3.3U | 1 | |
| C702 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C703 | ECEV1EV4R7Q | E.CAPACITOR CH 25V 4.7U | 1 | |
| C704 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C705 | ECEV1EV330Q | E.CAPACITOR CH 25V 33U | 1 | |
| C706,07 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 2 | |
| C801 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C802 | ECEV1CV100Q | E.CAPACITOR CH 16V 10U | 1 | |
| C803 | ECA1CM332 | E.CAPACITOR 16V 3300U | 1 | |
| C804-08 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 5 | |
| C809 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C810,11 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 2 | |
| C812,13 | ECA1CM332 | E.CAPACITOR 16V 3300U | 2 | |
| C814 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C817 | ECEV1EV4R7Q | E.CAPACITOR CH 25V 4.7U | 1 | |
| C903-05 | ECUX1H221JCV | C.CAPACITOR CH 50V 220P | 3 | |
| C906 | ECUX1H100DCV | C.CAPACITOR CH 50V 10P | 1 | |
| | | | | |
| D10 | MA728 | DIODE | 1 | |
| D11,12 | MA736 | DIODE | 2 | |
| D13 | MA728 | DIODE | 1 | |
| D100 | MA142K | DIODE | 1 | |
| D101,02 | MA143 | DIODE | 2 | |
| D103 | MA736 | DIODE | 1 | |
| D200,01 | MA143 | DIODE | 2 | |
| D301 | MA728 | DIODE | 1 | |
| D302 | MA736 | DIODE | 1 | |
| D303 | MA728 | DIODE | 1 | |
| D304 | MA736 | DIODE | 1 | |
| D401 | MA736 | DIODE | 1 | |
| D402-05 | MA143 | DIODE | 4 | |
| D406 | MA736 | DIODE | 1 | |
| D501 | MA141WK | DIODE | 1 | |
| D502-04 | MA142WA | DIODE | 3 | |
| D505 | MA142WK | DIODE | 1 | |
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| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| D701 | MA143 | DIODE | 1 | |
| D702 | MA3062M | DIODE | 1 | |
| D703 | MA738 | DIODE | 1 | |
| D704 | MA3056-L | DIODE | 1 | |
| D801-03 | MA141WK | DIODE | 3 | |
| D807 | MA141WK | DIODE | 1 | |
| D811, 12 | MA141WK | DIODE | 2 | |
| D813 | 21DQ04 | DIODE | 1 | |
| D814-16 | MA141WK | DIODE | 3 | |
| D817-28 | MA738 | DIODE | 12 | |
| D829 | NSQ03A04 | DIODE | 1 | |
| D830 | MA8051-H | DIODE | 1 | |
| D831, 32 | NSQ03A04 | DIODE | 2 | |
| D833 | MA142WK | DIODE | 1 | |
| | | | | |
| IC6 | TA75W01FU | IC | 1 | |
| IC7 | TA75W393FU | IC | 1 | |
| IC9 | TA75W393FU | IC | 1 | |
| IC100 | MN6755486H7H | IC | 1 | |
| IC101 | SC371025VFU | IC | 1 | |
| IC103 | UPC4556G2 | IC | 1 | |
| IC104 | MN13821-S | IC | 1 | |
| IC110 | XC62AP3002P | IC | 1 | |
| IC200 | TB6519F | IC | 1 | |
| IC201, 02 | UN224 | TRANSISTOR-RESISTOR | 2 | |
| IC203 | TA75W393FU | IC | 1 | |
| IC204 | TA75W01FU | IC | 1 | |
| IC205 | TB6519F | IC | 1 | |
| IC301 | TL1451CDB | IC | 1 | |
| IC302, 03 | AN3841SR | IC | 2 | |
| IC401, 02 | TA75W393FU | IC | 2 | |
| IC403 | TA75W01FU | IC | 1 | |
| IC404, 05 | TC7W74FU | IC | 2 | |
| IC406, 07 | UPC4558G2 | IC | 2 | |
| IC409, 10 | TA75W01FU | IC | 2 | |
| IC501 | MN6755486H7G | IC | 1 | |
| IC502 | TC7W04FU | IC | 1 | |
| IC503 | TA75W393FU | IC | 1 | |
| IC701 | TA75W393FU | IC | 1 | |
| IC702 | BA6219BFP-Y | IC | 1 | |
| IC801 | MC14538BF | IC | 1 | |
| IC802 | NJM2904M | IC | 1 | |
| IC803 | MC14538BF | IC | 1 | |
| IC804 | MC74HC11F | IC | 1 | |
| IC805, 06 | TC7W04FU | IC | 2 | |
| | | | | |
| L1 | VLQ0407120M | COIL 12UH | 1 | |
| L2 | VLQ0129 | COIL 300UH | 1 | |
| L4 | VLQ0407151K | COIL 150UH | 1 | |
| L101 | VLQ0319K101 | COIL 100UH | 1 | |
| L102-04 | VLQ0319K100 | COIL 10UH | 3 | |
| L200 | VLQ0319K100 | COIL 10UH | 1 | |
| L301 | VLQ0407120M | COIL 12UH | 1 | |
| L302, 03 | VLQ0407151K | COIL 150UH | 2 | |
| L501 | VLQ0319K100 | COIL 10UH | 1 | |
| L701 | VLQ0319K101 | COIL 100UH | 1 | |
| | | | | |
| P600 | VJP3172D003 | CONNECTOR (MALE) | 1 | |
| P601 | VJP3172D002 | CONNECTOR (MALE) | 1 | |
| P602 | VJP3172D004 | CONNECTOR (MALE) | 1 | |
| P603 | VJP3172D002 | CONNECTOR (MALE) | 1 | |
| P604 | VJP3172D003 | CONNECTOR (MALE) | 1 | |
| P605 | VJP3518B002 | CONNECTOR (MALE) | 1 | |
| P606 | VJP3172D003 | CONNECTOR (MALE) | 1 | |
| P607 | VJS3801B010 | CONNECTOR (FEMALE) | 1 | |
| P608 | VJP3518B002 | CONNECTOR (MALE) | 1 | |
| P609 | VJP3172D002 | CONNECTOR (MALE) | 1 | |
| P610 | VJP3518B003 | CONNECTOR (MALE) | 1 | |
| P611 | VJP3518B002 | CONNECTOR (MALE) | 1 | |
| P612 | VJP3172D004 | CONNECTOR (MALE) | 1 | |
| P613 | VJS3406B015 | CONNECTOR (FEMALE) | 1 | |
| P614, 15 | VJS3813C017 | CONNECTOR (FEMALE) | 2 | |
| P616 | VJS3406B019 | CONNECTOR (FEMALE) | 1 | |
| P617 | VJP1232T | CONNECTOR (MALE) 5P | 1 | |
| P618 | VJP3125B002 | CONNECTOR (MALE) | 1 | |
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| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| P619 | VJP3809A060 | CONNECTOR (MALE) | 1 | |
| P620 | VJP3358B022 | CONNECTOR (MALE) | 1 | |
| | | | | |
| Q2 | 2SD1820-R | TRANSISTOR | 1 | |
| Q3, Q4 | 2SB1073-R | TRANSISTOR | 2 | |
| Q5-Q7 | 2SD1820-R | TRANSISTOR | 3 | |
| Q100, 01 | 2SD1820-R | TRANSISTOR | 2 | |
| Q103, 04 | 2SD1820-R | TRANSISTOR | 2 | |
| Q105 | 2SB1219A-R | TRANSISTOR | 1 | |
| Q106 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q301, 02 | 2SB1073-R | TRANSISTOR | 2 | |
| Q401 | 2SB1219A-R | TRANSISTOR | 1 | |
| Q502, 03 | 2SD1819A-R | TRANSISTOR | 2 | |
| Q702 | 2SB1073-R | TRANSISTOR | 1 | |
| Q703 | 2SD1624-S | TRANSISTOR | 1 | |
| Q811 | 2SB936AQPDSX | TRANSISTOR | 1 | |
| Q812 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q815 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q816, 17 | 2SB1073-R | TRANSISTOR | 2 | |
| Q819 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q820 | 2SB1219A-R | TRANSISTOR | 1 | |
| Q821, 22 | 2SD1624-S | TRANSISTOR | 2 | |
| Q823 | 2SB1219A-R | TRANSISTOR | 1 | |
| Q825 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q826, 27 | 2SB1073-R | TRANSISTOR | 2 | |
| Q829 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q830 | 2SB1219A-R | TRANSISTOR | 1 | |
| Q831, 32 | 2SD1624-S | TRANSISTOR | 2 | |
| Q833 | 2SB1219A-R | TRANSISTOR | 1 | |
| Q835 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q836, 37 | 2SB1073-R | TRANSISTOR | 2 | |
| Q839 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q840 | 2SB1219A-R | TRANSISTOR | 1 | |
| Q841, 42 | 2SD1624-S | TRANSISTOR | 2 | |
| Q843 | 2SB1219A-R | TRANSISTOR | 1 | |
| Q906 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q908 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q914 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q918 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q922 | 2SD1819A-R | TRANSISTOR | 1 | |
| | | | | |
| QR2 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| QR5 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| QR101, 02 | UN5213 | TRANSISTOR-RESISTOR | 2 | |
| QR106 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| QR149, 50 | UN5213 | TRANSISTOR-RESISTOR | 2 | |
| QR305 | UN5113 | TRANSISTOR-RESISTOR | 1 | |
| QR306 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| QR501 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| QR504 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| QR701, 02 | UN5114 | TRANSISTOR-RESISTOR | 2 | |
| QR703, 04 | UN5214 | TRANSISTOR-RESISTOR | 2 | |
| QR801 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| QR804 | UN5214 | TRANSISTOR-RESISTOR | 1 | |
| QR809, 10 | UN5214 | TRANSISTOR-RESISTOR | 2 | |
| QR813 | UN5214 | TRANSISTOR-RESISTOR | 1 | |
| QR814 | UN5114 | TRANSISTOR-RESISTOR | 1 | |
| QR818 | UN5114 | TRANSISTOR-RESISTOR | 1 | |
| QR824 | UN5114 | TRANSISTOR-RESISTOR | 1 | |
| QR828 | UN5114 | TRANSISTOR-RESISTOR | 1 | |
| QR834 | UN5114 | TRANSISTOR-RESISTOR | 1 | |
| QR838 | UN5114 | TRANSISTOR-RESISTOR | 1 | |
| QR844-46 | UN5214 | TRANSISTOR-RESISTOR | 3 | |
| QR905 | UN5214 | TRANSISTOR-RESISTOR | 1 | |
| QR907 | UN5214 | TRANSISTOR-RESISTOR | 1 | |
| QR913 | UN5214 | TRANSISTOR-RESISTOR | 1 | |
| QR915 | UN5214 | TRANSISTOR-RESISTOR | 1 | |
| QR917 | UN5214 | TRANSISTOR-RESISTOR | 1 | |
| QR919-21 | UN5214 | TRANSISTOR-RESISTOR | 3 | |
| | | | | |
| R19 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R20 | ERJ8GCYJ681 | M.RESISTOR CH 1/8W 680 | 1 | |
| R22 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R23 | ERJ3GEYJ393 | M.RESISTOR CH 1/16W 39K | 1 | |
| R24, 25 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 2 | |
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| Ref.No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R26 | ERJ3GEYJ394 | M.RESISTOR CH 1/16W 390K | 1 | |
| R27 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R28 | ERJ3GEYJ123 | M.RESISTOR CH 1/16W 12K | 1 | |
| R29 | ERJ3GEYG472 | M.RESISTOR CH 1/16W 4.7K | 1 | |
| R30 | ERJ3GEYJ394 | M.RESISTOR CH 1/16W 390K | 1 | |
| R31 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R32 | ERJ3GEYJ123 | M.RESISTOR CH 1/16W 12K | 1 | |
| R33 | ERJ3GEYG472 | M.RESISTOR CH 1/16W 4.7K | 1 | |
| R34 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R36 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R37 | ERJ3GEYJ393 | M.RESISTOR CH 1/16W 39K | 1 | |
| R38 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R42,43 | ERJ3GEYG472 | M.RESISTOR CH 1/16W 4.7K | 2 | |
| R44 | ERJ3GEYJ564 | M.RESISTOR CH 1/16W 560K | 1 | |
| R45 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R46 | ERJ3GEYJ563 | M.RESISTOR CH 1/16W 56K | 1 | |
| R47 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R49,50 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 2 | |
| R51 | ERJ3GEYJ334 | M.RESISTOR CH 1/16W 330K | 1 | |
| R52 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R54 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R63 | ERJ8GCYJ681 | M.RESISTOR CH 1/8W 680 | 1 | |
| R64 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R77 | ERJ3GEYG472 | M.RESISTOR CH 1/16W 4.7K | 1 | |
| R78 | ERJ3GEYJ823 | M.RESISTOR CH 1/16W 82K | 1 | |
| R84 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R93 | ERJ3GEYJ562 | M.RESISTOR CH 1/16W 5.6K | 1 | |
| R101 | ERJ8GCY0R00 | M.RESISTOR CH 1/8W 0 | 1 | |
| R102,03 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 2 | |
| R104-07 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 4 | |
| R111 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R112 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R118-26 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 9 | |
| R128 | ERJ3GEYG682 | M.RESISTOR CH1/16W 6.8K | 1 | |
| R129 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R130 | ERJ3GEYJ683 | M.RESISTOR CH 1/16W 68K | 1 | |
| R131 | ERJ3GEYJ334 | M.RESISTOR CH 1/16W 330K | 1 | |
| R132 | ERJ3GEYJ823 | M.RESISTOR CH 1/16W 82K | 1 | |
| R133 | ERJ3GEYG822 | M.RESISTOR CH1/16W 8.2K | 1 | |
| R134 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R135 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R136 | ERJ3GEYJ563 | M.RESISTOR CH 1/16W 56K | 1 | |
| R137 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R138 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 1 | |
| R139 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R140 | ERJ3GEYJ562 | M.RESISTOR CH 1/16W 5.6K | 1 | |
| R141 | ERJ3GEYJ330 | M.RESISTOR CH 1/16W 33 | 1 | |
| R142 | ERJ3GEYJ562 | M.RESISTOR CH 1/16W 5.6K | 1 | |
| R143 | ERJ8GCYJ271 | M.RESISTOR CH 1/8W 270 | 1 | |
| R144 | ERJ3GEYJ182 | M.RESISTOR CH 1/16W 1.8K | 1 | |
| R145 | ERJ3GEYJ221 | M.RESISTOR CH 1/16W 220 | 1 | |
| R146 | ERJ3GEYJ182 | M.RESISTOR CH 1/16W 1.8K | 1 | |
| R148 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R149 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 1 | |
| R150 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R151 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R153 | ERJ3GEYG471 | M.RESISTOR CH 1/16W 470 | 1 | |
| R154 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R155 | ERJ3GEYG682 | M.RESISTOR CH1/16W 6.8K | 1 | |
| R156,57 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 2 | |
| R158-66 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 9 | |
| R167 | ERJ3GEYG152 | M.RESISTOR CH 1/16W 1.5K | 1 | |
| R172 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R174,75 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 2 | |
| R178 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 1 | |
| R179,80 | VRE0034E223 | M.RESISTOR CH 1/10W 22K | 2 | |
| R181 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R182 | ERJ3GEYJ122 | M.RESISTOR CH 1/16W 1.2K | 1 | |
| R183 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 1 | |
| R185 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R186,87 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 2 | |
| R189 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R190 | ERJ3GEYJ273 | M.RESISTOR CH 1/16W 27K | 1 | |
| R191 | ERJ3GEYJ223 | M.RESISTOR CH 1/16W 22K | 1 | |
| R192-95 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 4 | |
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| Ref.No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R196 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R204,05 | ERJ8GCYJ1R0 | M.RESISTOR CH 1/8W 1.0 | 2 | |
| R206 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R207 | ERJ3GEYJ153 | M.RESISTOR CH 1/16W 15K | 1 | |
| R209 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R210 | ERJ8GCYJ1R0 | M.RESISTOR CH 1/8W 1.0 | 1 | |
| R211 | ERJ3GEYJ393 | M.RESISTOR CH 1/16W 39K | 1 | |
| R212 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R213 | ERJ3GEYG472 | M.RESISTOR CH 1/16W 4.7K | 1 | |
| R214,15 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 2 | |
| R216 | ERJ3GEYJ184 | M.RESISTOR CH 1/16W 180K | 1 | |
| R217 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 1 | |
| R220 | ERJ3GEYJ821 | M.RESISTOR CH 1/16W 820 | 1 | |
| R226,27 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 2 | |
| R229 | ERJ3GEYJ561 | M.RESISTOR CH 1/16W 560 | 1 | |
| R233,34 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 2 | |
| R235 | ERJ8GCYJ1R0 | M.RESISTOR CH 1/8W 1.0 | 1 | |
| R236 | ERJ3GEYJ153 | M.RESISTOR CH 1/16W 15K | 1 | |
| R238 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R239 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 1 | |
| R240 | ERJ3GEYJ153 | M.RESISTOR CH 1/16W 15K | 1 | |
| R241 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R242 | ERJ3GEYJ184 | M.RESISTOR CH 1/16W 180K | 1 | |
| R243 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R244 | ERJ3GEYG471 | M.RESISTOR CH 1/16W 470 | 1 | |
| R245 | ERDS2TJ101 | C.RESISTOR 1/4W 100 | 1 | |
| R246 | ERJ3GEYG471 | M.RESISTOR CH 1/16W 470 | 1 | |
| R247 | ERJ3GEYJ821 | M.RESISTOR CH 1/16W 820 | 1 | |
| R248 | ERJ3GEYG332 | M.RESISTOR CH 1/16W 3.3K | 1 | |
| R249 | ERJ3GEYJ393 | M.RESISTOR CH 1/16W 39K | 1 | |
| R250,51 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 2 | |
| R257,58 | ERJ8GCYJ1R0 | M.RESISTOR CH 1/8W 1.0 | 2 | |
| R259 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R260 | ERJ3GEYJ561 | M.RESISTOR CH 1/16W 560 | 1 | |
| R263,64 | ERJ3GEYJ181 | M.RESISTOR CH 1/16W 180 | 2 | |
| R265,66 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 2 | |
| R267 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R301,02 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 2 | |
| R303 | ERJ3GEYJ273 | M.RESISTOR CH 1/16W 27K | 1 | |
| R304 | ERJ3GEYJ683 | M.RESISTOR CH 1/16W 68K | 1 | |
| R305 | ERJ3GEYJ273 | M.RESISTOR CH 1/16W 27K | 1 | |
| R306 | ERJ3GEYJ683 | M.RESISTOR CH 1/16W 68K | 1 | |
| R308-10 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 3 | |
| R312 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R313,14 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 2 | |
| R315 | ERJ3GEYJ153 | M.RESISTOR CH 1/16W 15K | 1 | |
| R316 | ERJ3GEYJ474 | M.RESISTOR CH 1/16W 470K | 1 | |
| R318 | VRE0034E183 | M.RESISTOR CH 1/10W 18K | 1 | |
| R319 | ERJ3GEYJ474 | M.RESISTOR CH 1/16W 470K | 1 | |
| R320 | ERJ3GEYJ153 | M.RESISTOR CH 1/16W 15K | 1 | |
| R327,28 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 2 | |
| R330 | ERJ8GCYJ1R0 | M.RESISTOR CH 1/8W 1.0 | 1 | |
| R332 | ERJ8GCYJ1R0 | M.RESISTOR CH 1/8W 1.0 | 1 | |
| R334,35 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 2 | |
| R337,38 | ERJ8GCYJ1R0 | M.RESISTOR CH 1/8W 1.0 | 2 | |
| R339 | ERJ3GEYJ330 | M.RESISTOR CH 1/16W 33 | 1 | |
| R340,41 | ERJ8GCYJ681 | M.RESISTOR CH 1/8W 680 | 2 | |
| R342 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R344 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R346-49 | ERJ3GEYJ330 | M.RESISTOR CH 1/16W 33 | 4 | |
| R356,57 | ERJ3GEYG471 | M.RESISTOR CH 1/16W 470 | 2 | |
| R358 | ERJ3GEYJ330 | M.RESISTOR CH 1/16W 33 | 1 | |
| R361 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 1 | |
| R362 | ERJ3GEYG472 | M.RESISTOR CH 1/16W 4.7K | 1 | |
| R363 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 1 | |
| R364 | ERJ3GEYG472 | M.RESISTOR CH 1/16W 4.7K | 1 | |
| R371,72 | ERJ3GEYJ271 | M.RESISTOR CH 1/16W 270 | 2 | |
| R401 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R402 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R404 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R406 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R407 | ERJ3GEYJ184 | M.RESISTOR CH 1/16W 180K | 1 | |
| R408 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R411 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R412 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
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| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R414 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R416 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R417 | ERJ3GEYJ184 | M. RESISTOR CH 1/16W 180K | 1 | |
| R418 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R421 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R422 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R424 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R426 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R427 | ERJ3GEYJ184 | M. RESISTOR CH 1/16W 180K | 1 | |
| R428 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R431 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R432 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R434 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R436 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R437 | ERJ3GEYJ184 | M. RESISTOR CH 1/16W 180K | 1 | |
| R438 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R441, 42 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 2 | |
| R443 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R444, 45 | ERJ3GEYJ273 | M. RESISTOR CH 1/16W 27K | 2 | |
| R448 | VRE0034E222 | M. RESISTOR CH 1/10W 2. 2K | 1 | |
| R449 | VRE0034E682 | M. RESISTOR CH 1/10W 6. 8K | 1 | |
| R451 | ERJ3GEYJ391 | M. RESISTOR CH 1/16W 390 | 1 | |
| R461 | ERJ3GEYJ331 | M. RESISTOR CH 1/16W 330 | 1 | |
| R468, 69 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 2 | |
| R470 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R471 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R472, 73 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 2 | |
| R501, 02 | ERJ3GEYJ182 | M. RESISTOR CH 1/16W 1. 8K | 2 | |
| R503-06 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 4 | |
| R508 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R509 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R510 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R512 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R513 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R514 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R515 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R516 | ERJ3GEYJ563 | M. RESISTOR CH 1/16W 56K | 1 | |
| R517, 18 | VRE0034E223 | M. RESISTOR CH 1/10W 22K | 2 | |
| R519-21 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 3 | |
| R524 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R526 | ERJ3GEYJ333 | M. RESISTOR CH 1/16W 33K | 1 | |
| R527 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R528 | ERJ3GEYJ183 | M. RESISTOR CH 1/16W 18K | 1 | |
| R532 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R533 | ERJ3GEYJ183 | M. RESISTOR CH 1/16W 18K | 1 | |
| R534 | ERJ3GEYJ333 | M. RESISTOR CH 1/16W 33K | 1 | |
| R535 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R536 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R537-40 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 4 | |
| R541 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R542 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R543 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R544 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R545-51 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 7 | |
| R701, 02 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 2 | |
| R703 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R704 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R706 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R707 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R708 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R709 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R710 | ERJ3GEYJ394 | M. RESISTOR CH 1/16W 390K | 1 | |
| R711 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R712, 13 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 2 | |
| R714 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R715 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R716, 17 | ERJ8GCYG101 | M. RESISTOR CH 1/8W 100 | 2 | |
| R718 | ERJ8GCYJ300 | M. RESISTOR CH 1/8W 30 | 1 | |
| R721 | ERJ6GEYG271 | M. RESISTOR CH 1/10W 270 | 1 | |
| R722 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R727-30 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 4 | |
| R731-34 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 4 | |
| R735 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R736 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R737, 38 | ERJ8GCYJ102 | M. RESISTOR CH 1/8W 1K | 2 | |
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| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R739-42 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 4 | |
| R743-46 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 4 | |
| R747 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R748 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R749 | ERJ8GCY0R00 | M. RESISTOR CH 1/8W 0 | 1 | |
| R801 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R803, 04 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 2 | |
| R805 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R806 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R810, 11 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 2 | |
| R815-17 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 3 | |
| R819, 20 | ERJ3GEYJ563 | M. RESISTOR CH 1/16W 56K | 2 | |
| R821 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R822 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R823-25 | ERJ6GEYG681 | M. RESISTOR CH 1/10W 680 | 3 | |
| R826, 27 | ERJ3GEYJ394 | M. RESISTOR CH 1/16W 390K | 2 | |
| R828 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R829 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R830 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R831, 32 | ERJ8GCYJ391 | M. RESISTOR CH 1/8W 390 | 2 | |
| R833 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R834, 35 | ERJ8GCYJ391 | M. RESISTOR CH 1/8W 390 | 2 | |
| R836 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R837 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R838 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R839 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R840, 41 | ERJ8GCYJ391 | M. RESISTOR CH 1/8W 390 | 2 | |
| R842 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R843, 44 | ERJ8GCYJ391 | M. RESISTOR CH 1/8W 390 | 2 | |
| R845 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R846 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R847, 48 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 2 | |
| R849 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R850 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R851, 52 | ERJ8GCYJ391 | M. RESISTOR CH 1/8W 390 | 2 | |
| R853 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R854, 55 | ERJ8GCYJ391 | M. RESISTOR CH 1/8W 390 | 2 | |
| R856 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R857 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R858 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R859 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R860, 61 | ERJ8GCYJ391 | M. RESISTOR CH 1/8W 390 | 2 | |
| R862 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R863, 64 | ERJ8GCYJ391 | M. RESISTOR CH 1/8W 390 | 2 | |
| R865 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R866 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R867, 68 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 2 | |
| R869 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R870 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R871, 72 | ERJ8GCYJ391 | M. RESISTOR CH 1/8W 390 | 2 | |
| R873 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R874, 75 | ERJ8GCYJ391 | M. RESISTOR CH 1/8W 390 | 2 | |
| R876 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R877 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R878 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R879 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R880 | ERJ8GCYJ391 | M. RESISTOR CH 1/8W 390 | 1 | |
| R881 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R882-84 | ERJ8GCYJ391 | M. RESISTOR CH 1/8W 390 | 3 | |
| R885 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R886 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R887 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R890-95 | ERJ12YJ3R3 | M. RESISTOR CH 1/2W 3. 3 | 6 | |
| R897, 98 | ERJ12YJ3R3 | M. RESISTOR CH 1/2W 3. 3 | 2 | |
| R905 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R906 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R907 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R908 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R910 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R913 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R914 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R915 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R917, 18 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 2 | |
| R919-21 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 3 | |
| R922 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
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VEP02437B

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R923 | ERJ3GEYJ273 | M.RESISTOR CH 1/16W 27K | 1 | |
| R924 | ERJ3GEYJ223 | M.RESISTOR CH 1/16W 22K | 1 | |
| R925 | ERJ3GEYJ273 | M.RESISTOR CH 1/16W 27K | 1 | |
| R926 | ERJ3GEYJ223 | M.RESISTOR CH 1/16W 22K | 1 | |
| R927, 28 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 2 | |
| R932 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| | | | | |
| TG114 | EYF6CU | TEST POINT | 1 | |
| TG300 | EYF6CU | TEST POINT | 1 | |
| | | | | |
| VR101 | EVM7JGA00B54 | V.RESISTOR 50K | 1 | |
| VR401 | EVM7JGA00B54 | V.RESISTOR 50K | 1 | |
| VR402 | EVM7JGA00B24 | V.RESISTOR 20K | 1 | |
| VR501, 02 | EVM7JGA00B24 | V.RESISTOR 20K | 2 | |
| | | | | |
| | | MISCELLANEOUS | | |
| | | | | |
| | VSC4371 | SHIELD CASE | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
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SERVO/

VEP03B95A

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
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| ■ | VEP03B95A | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | RF | | |
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| | | | | |
| C1, C2 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C3 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C4, C5 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C6 | ECEV1CV470Q | E. CAPACITOR CH 16V 47U | 1 | |
| C7 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C8 | ECEV0JV101Q | E. CAPACITOR CH6. 3V 100U | 1 | |
| C9, 10 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C11 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C12 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C13 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C14, 15 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C16 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C17, 18 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C19 | ECEV0GV470Q | E. CAPACITOR CH 4V 47U | 1 | |
| C20, 21 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C22 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C23, 24 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C25 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C26-30 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 5 | |
| C100 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C102 | ECUX1H471JCV | C. CAPACITOR CH 50V 470P | 1 | |
| C104 | ECUX1H270JCV | C. CAPACITOR CH 50V 27P | 1 | |
| C105, 06 | ECUX1H080DCV | C. CAPACITOR CH 50V 8P | 2 | |
| C107 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C109 | ECUX1H471JCV | C. CAPACITOR CH 50V 470P | 1 | |
| C111 | ECUX1H270JCV | C. CAPACITOR CH 50V 27P | 1 | |
| C112, 13 | ECUX1H080DCV | C. CAPACITOR CH 50V 8P | 2 | |
| C114, 15 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C200 | ECUX1H121JCV | C. CAPACITOR CH 50V 120P | 1 | |
| C208 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C210 | ECUM1C105KBM | C. CAPACITOR CH 16V 1U | 1 | |
| C211 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C212 | ECUX1H150JCV | C. CAPACITOR CH 50V 15P | 1 | |
| C213 | ECUM1C105KBM | C. CAPACITOR CH 16V 1U | 1 | |
| C214, 15 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C217, 18 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C219 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C220, 21 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C223, 24 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C225 | ECUX1H121JCV | C. CAPACITOR CH 50V 120P | 1 | |
| C231 | ECUM1C105KBM | C. CAPACITOR CH 16V 1U | 1 | |
| C232 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C233 | ECUX1H150JCV | C. CAPACITOR CH 50V 15P | 1 | |
| C234 | ECUM1C105KBM | C. CAPACITOR CH 16V 1U | 1 | |
| C235, 36 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C238 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C240, 41 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C243-46 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 4 | |
| C248-50 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C251, 52 | ECUX1H102JV | C. CAPACITOR CH 50V 1000P | 2 | |
| C253 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C254, 55 | ECUX1H102JV | C. CAPACITOR CH 50V 1000P | 2 | |
| C257-60 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 4 | |
| C261, 62 | ECEV1EV4R7Q | E. CAPACITOR CH 25V 4. 7U | 2 | |
| C263 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C264 | ECUX1H220JCV | C. CAPACITOR CH 50V 22P | 1 | |
| C265 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C266 | ECUX1H220JCV | C. CAPACITOR CH 50V 22P | 1 | |
| C267, 68 | ECUX1H101JCV | C. CAPACITOR CH 50V 100P | 2 | |
| C269 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C270 | ECEV1HNR22Q | E. CAPACITOR CH 50V 0. 22U | 1 | |
| C271, 72 | ECUX1H221JCV | C. CAPACITOR CH 50V 220P | 2 | |
| C300-07 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 8 | |
| C309 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C311 | ECUX1H470JCV | C. CAPACITOR CH 50V 47P | 1 | |
| C312 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C313 | ECUX1H150JCV | C. CAPACITOR CH 50V 15P | 1 | |
| C314-18 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 5 | |
| C319 | ECUX1H680JCV | C. CAPACITOR CH 50V 68P | 1 | |
| | | | | |
| | | | | |
| C320 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C321 | ECUX1H560JCV | C. CAPACITOR CH 50V 56P | 1 | |
| C322 | ECUX1H470JCV | C. CAPACITOR CH 50V 47P | 1 | |
| C323 | ECUX1H560JCV | C. CAPACITOR CH 50V 56P | 1 | |
| C324 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C400-07 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 8 | |
| C408 | ECUX1H471JCV | C. CAPACITOR CH 50V 470P | 1 | |
| C409 | ECUX1H820JCV | C. CAPACITOR CH 50V 82P | 1 | |
| C410-16 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 7 | |
| C417 | ECUX1H561JCV | C. CAPACITOR CH 50V 560P | 1 | |
| C418-21 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 4 | |
| C422 | ECEV1CV100Q | E. CAPACITOR CH 16V 10U | 1 | |
| C423 | ECUX1H821JV | C. CAPACITOR CH 50V 820P | 1 | |
| C424 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C425 | ECUX1H150JCV | C. CAPACITOR CH 50V 15P | 1 | |
| C426 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C427 | ECUX1H101JCV | C. CAPACITOR CH 50V 100P | 1 | |
| C428 | ECEV1CV100Q | E. CAPACITOR CH 16V 10U | 1 | |
| C429-31 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C432 | ECUX1H332KBV | C. CAPACITOR CH 50V 3300P | 1 | |
| C433 | ECUX1H121JCV | C. CAPACITOR CH 50V 120P | 1 | |
| C434 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C435 | ECUX1H221JCV | C. CAPACITOR CH 50V 220P | 1 | |
| C500 | ECUX1H102JV | C. CAPACITOR CH 50V 1000P | 1 | |
| C501-08 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 8 | |
| C509, 10 | ECUX1H122KBV | C. CAPACITOR CH 50V 1200P | 2 | |
| C511-14 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 4 | |
| C515 | ECUX1H680JCV | C. CAPACITOR CH 50V 68P | 1 | |
| C516-22 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 7 | |
| C523-26 | ECUX1H152KBV | C. CAPACITOR CH 50V 1500P | 4 | |
| C527-29 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C530 | ECUM1C104KBN | C. CAPACITOR CH 16V 0. 1U | 1 | |
| C531 | ECUX1H471JCV | C. CAPACITOR CH 50V 470P | 1 | |
| C532-34 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C535 | ECUX1H152KBV | C. CAPACITOR CH 50V 1500P | 1 | |
| C536-51 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 16 | |
| | | | | |
| D200-03 | MA141WK | DIODE | 4 | |
| D400 | MA141WA | DIODE | 1 | |
| D401 | MA141WK | DIODE | 1 | |
| | | | | |
| FL1 | VLF0941C223 | FILTER | 1 | |
| | | | | |
| IC1 | TCVHC125FS | IC | 1 | |
| IC2 | TC7S04FU | IC | 1 | |
| IC3 | XC62AP5002P | IC | 1 | |
| IC4 | XC62DN5002P | IC | 1 | |
| IC5 | XC62AP3002P | IC | 1 | |
| IC6 | XC62AP5002ML | IC | 1 | |
| IC7 | XC62DN5002P | IC | 1 | |
| IC8 | TCVHC125FS | IC | 1 | |
| IC9 | TC7S00FU | IC | 1 | |
| IC10 | TC7W02FU | IC | 1 | |
| IC11 | TC7S04FU | IC | 1 | |
| IC100 | TC7W04FU | IC | 1 | |
| IC101 | TC7W00FU | IC | 1 | |
| IC200, 01 | TC4S69F | IC | 2 | |
| IC203 | NJM062M | IC | 1 | |
| IC204 | XC62DN5002P | IC | 1 | |
| IC205, 06 | TC4S69F | IC | 2 | |
| IC207 | NJM062M | IC | 1 | |
| IC208 | UPC1663G | IC | 1 | |
| IC209 | TC7W32FU | IC | 1 | |
| IC210, 11 | TC7S04FU | IC | 2 | |
| IC300 | UPC5102GS030 | IC | 1 | |
| IC301 | TC7W04FU | IC | 1 | |
| IC302 | UPC1663G | IC | 1 | |
| IC303 | TC7W08FU | IC | 1 | |
| IC304 | TC7W04FU | IC | 1 | |
| IC400 | UPC5102GS030 | IC | 1 | |
| IC401 | UPC1663G | IC | 1 | |
| IC402 | NJM062M | IC | 1 | |
| IC403 | TC7S86FU | IC | 1 | |
| IC404 | TC4W53F | IC | 1 | |
| IC500 | AN3730FA | IC | 1 | |
| | | | | |
| | | | | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| IC501 | AN3740FAP | IC | 1 | |
| IC502 | MC14053BF | IC | 1 | |
| | | | | |
| L1 | VLQ0319K220 | COIL 22UH | 1 | |
| L2, L3 | VLQ0319K101 | COIL 100UH | 2 | |
| L100-03 | VLQ0163J2R2 | COIL 2. 2UH | 4 | |
| L200-03 | VLQ0163J330 | COIL 33UH | 4 | |
| L300, 01 | VLQ0163J1R0 | COIL 1UH | 2 | |
| L303 | VLQ0163JR22 | COIL 0. 22UH | 1 | |
| L400 | VLQ0163JR22 | COIL 0. 22UH | 1 | |
| L401 | VLQ0163J1R0 | COIL 1UH | 1 | |
| L402 | VLQ0163J470 | COIL 47UH | 1 | |
| L403 | VLQ0163JR22 | COIL 0. 22UH | 1 | |
| | | | | |
| P1 | VJS3827A060B | CONNECTOR (FEMALE) | 1 | |
| P2 | VJP3358C012 | CONNECTOR (MALE) | 1 | |
| P3 | VJS3899B013 | CONNECTOR (FEMALE) | 1 | |
| P4 | VJS3898B010 | CONNECTOR (FEMALE) | 1 | |
| | | | | |
| Q1 | 2SB1114 | TRANSISTOR | 1 | |
| Q2 | 2SD1280-S | TRANSISTOR | 1 | |
| Q3 | 2SB1218A-R | TRANSISTOR | 1 | |
| Q100 | 2SB709-R | TRANSISTOR | 1 | |
| Q101 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q102, 03 | 2SC3735B35 | TRANSISTOR | 2 | |
| Q104 | 2SB709-R | TRANSISTOR | 1 | |
| Q105 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q106, 07 | 2SC3735B35 | TRANSISTOR | 2 | |
| Q201 | 2SA1532-B | TRANSISTOR | 1 | |
| Q202-05 | 2SD1979 | TRANSISTOR | 4 | |
| Q207 | 2SC3935 | TRANSISTOR | 1 | |
| Q208, 09 | 2SC2954 | TRANSISTOR | 2 | |
| Q210 | 2SC3935 | TRANSISTOR | 1 | |
| Q212, 13 | 2SA1532-B | TRANSISTOR | 2 | |
| Q214 | 2SC2954 | TRANSISTOR | 1 | |
| Q215 | 2SA1532-B | TRANSISTOR | 1 | |
| Q216-19 | 2SD1979 | TRANSISTOR | 4 | |
| Q221, 22 | 2SC2954 | TRANSISTOR | 2 | |
| Q225, 26 | 2SA1532-B | TRANSISTOR | 2 | |
| Q227 | 2SC2954 | TRANSISTOR | 1 | |
| Q228 | 2SD1280-S | TRANSISTOR | 1 | |
| Q229 | 2SB1218A-R | TRANSISTOR | 1 | |
| Q230 | 2SB1114 | TRANSISTOR | 1 | |
| Q231-34 | 2SK508K512 | TRANSISTOR | 4 | |
| Q235 | 2SB1114 | TRANSISTOR | 1 | |
| Q300 | XN5531 | TRANSISTOR | 1 | |
| Q304, 05 | 2SC3935 | TRANSISTOR | 2 | |
| Q306 | 2SC3930-B | TRANSISTOR | 1 | |
| Q307 | XN5531 | TRANSISTOR-RESISTOR | 1 | |
| Q400 | 2SC3930-B | TRANSISTOR | 1 | |
| Q401 | 2SC3930-BC | TRANSISTOR | 1 | |
| Q403 | 2SC3930-BC | TRANSISTOR | 1 | |
| Q404 | XN5531 | TRANSISTOR-RESISTOR | 1 | |
| Q405 | XN6435 | TRANSISTOR-RESISTOR | 1 | |
| Q406-11 | 2SC3930-B | TRANSISTOR | 6 | |
| Q500 | 2SC3930-B | TRANSISTOR | 1 | |
| Q501 | 2SB1219A-R | TRANSISTOR | 1 | |
| | | | | |
| QR1 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| QR100, 01 | UN5213 | TRANSISTOR-RESISTOR | 2 | |
| QR200, 01 | UN5213 | TRANSISTOR-RESISTOR | 2 | |
| QR400 | UN5212 | TRANSISTOR-RESISTOR | 1 | |
| QR401 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| | | | | |
| R1 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R3 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R4 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 1 | |
| R5 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R6 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R7 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R8 | ERJ6GEY0R00 | M. RESISTOR CH 1/10W 0 | 1 | |
| R9 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R11 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R100, 01 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 2 | |
| R102 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R103 | ERJ3GEYJ563 | M. RESISTOR CH 1/16W 56K | 1 | |
| R104 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R105 | ERJ6GEYJ5R6 | M. RESISTOR CH 1/10W 5. 6 | 1 | |
| R106 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R107 | ERJ3GEYJ122 | M. RESISTOR CH 1/16W 1. 2K | 1 | |
| R108, 09 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R110 | ERJ6GEYG270 | M. RESISTOR CH 1/10W 27 | 1 | |
| R111 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R112 | ERJ3GEYJ122 | M. RESISTOR CH 1/16W 1. 2K | 1 | |
| R114 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R115 | ERJ3GEYJ563 | M. RESISTOR CH 1/16W 56K | 1 | |
| R116 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R117 | ERJ6GEYJ5R6 | M. RESISTOR CH 1/10W 5. 6 | 1 | |
| R118 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R119 | ERJ3GEYJ122 | M. RESISTOR CH 1/16W 1. 2K | 1 | |
| R120, 21 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R122 | ERJ6GEYG270 | M. RESISTOR CH 1/10W 27 | 1 | |
| R123 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R124 | ERJ3GEYJ122 | M. RESISTOR CH 1/16W 1. 2K | 1 | |
| R200-02 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 3 | |
| R203-06 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 4 | |
| R207, 08 | ERJ3GEYJ122 | M. RESISTOR CH 1/16W 1. 2K | 2 | |
| R212, 13 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 2 | |
| R218 | ERJ3GEYG471 | M. RESISTOR CH 1/16W 470 | 1 | |
| R219 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R220 | ERJ3GEYG471 | M. RESISTOR CH 1/16W 470 | 1 | |
| R221 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R222, 23 | ERJ3GEYJ330 | M. RESISTOR CH 1/16W 33 | 2 | |
| R224 | ERJ3GEYJ681 | M. RESISTOR CH 1/16W 680 | 1 | |
| R225, 26 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 2 | |
| R227 | ERJ3GEYJ221 | M. RESISTOR CH 1/16W 220 | 1 | |
| R229 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R230 | ERJ3GEYJ681 | M. RESISTOR CH 1/16W 680 | 1 | |
| R231 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R232 | ERJ3GEYJ272 | M. RESISTOR CH 1/16W 2. 7K | 1 | |
| R233, 34 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 2 | |
| R237 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R238, 39 | ERJ3GEYJ182 | M. RESISTOR CH 1/16W 1. 8K | 2 | |
| R240 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R241 | ERJ14YJ270H | M. RESISTOR CH 1/4W 27 | 1 | |
| R242-44 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 3 | |
| R245-48 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 4 | |
| R249, 50 | ERJ3GEYJ122 | M. RESISTOR CH 1/16W 1. 2K | 2 | |
| R251, 52 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 2 | |
| R253 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R262, 63 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 2 | |
| R264 | ERJ3GEYJ221 | M. RESISTOR CH 1/16W 220 | 1 | |
| R266 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R268 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R269 | ERJ3GEYJ272 | M. RESISTOR CH 1/16W 2. 7K | 1 | |
| R270, 71 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 2 | |
| R274 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R275, 76 | ERJ3GEYJ182 | M. RESISTOR CH 1/16W 1. 8K | 2 | |
| R277 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R278 | ERJ14YJ270H | M. RESISTOR CH 1/4W 27 | 1 | |
| R280 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R287, 88 | ERJ3GEYJ182 | M. RESISTOR CH 1/16W 1. 8K | 2 | |
| R289, 90 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R291 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R292 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 1 | |
| R293-96 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 4 | |
| R300 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R301 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R309, 10 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 2 | |
| R318 | ERJ3GEYJ221 | M. RESISTOR CH 1/16W 220 | 1 | |
| R319 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R320 | ERJ3GEYJ272 | M. RESISTOR CH 1/16W 2. 7K | 1 | |
| R321, 22 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 2 | |
| R323 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R324, 25 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 2 | |
| R326, 27 | ERJ3GEYJ331 | M. RESISTOR CH 1/16W 330 | 2 | |
| R328, 29 | ERJ3GEYG471 | M. RESISTOR CH 1/16W 470 | 2 | |
| R330 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R331 | ERJ3GEYJ182 | M. RESISTOR CH 1/16W 1. 8K | 1 | |
| R332-34 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 3 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R335, 36 | ERJ3GEYJ272 | M. RESISTOR CH 1/16W 2. 7K | 2 | |
| R337 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R338 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R339 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R340 | ERJ3GEYJ333 | M. RESISTOR CH 1/16W 33K | 1 | |
| R341 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R343 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R400 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R401, 02 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 2 | |
| R403 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R404 | ERJ3GEYJ272 | M. RESISTOR CH 1/16W 2. 7K | 1 | |
| R405, 06 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 2 | |
| R407 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R408-11 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 4 | |
| R412, 13 | ERJ3GEYG471 | M. RESISTOR CH 1/16W 470 | 2 | |
| R414 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R415 | ERJ3GEYJ182 | M. RESISTOR CH 1/16W 1. 8K | 1 | |
| R416 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R417, 18 | ERJ3GEYJ562 | M. RESISTOR CH 1/16W 5. 6K | 2 | |
| R419, 20 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 2 | |
| R421, 22 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 2 | |
| R423, 24 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 2 | |
| R425 | ERJ3GEYJ561 | M. RESISTOR CH 1/16W 560 | 1 | |
| R426, 27 | ERJ3GEYJ150 | M. RESISTOR CH 1/16W 15 | 2 | |
| R428 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R429 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 1 | |
| R430 | ERJ3GEYJ563 | M. RESISTOR CH 1/16W 56K | 1 | |
| R431, 32 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 2 | |
| R433 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R434 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R435 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R436 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R437, 38 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 2 | |
| R439 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R440 | ERJ3GEYG683 | M. RESISTOR CH 1/16W 68K | 1 | |
| R441 | ERJ3GEYG103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R442 | ERJ3GEYJ333 | M. RESISTOR CH 1/16W 33K | 1 | |
| R443 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R444 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R445, 46 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R447, 48 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 2 | |
| R449 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R450 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R455, 56 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 2 | |
| R458 | ERJ3GEYJ333 | M. RESISTOR CH 1/16W 33K | 1 | |
| R500 | ERJ3GEYJ122 | M. RESISTOR CH 1/16W 1. 2K | 1 | |
| R501 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R503 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R504 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R505 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R506 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R508, 09 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 2 | |
| R510 | ERJ3GEYJ562 | M. RESISTOR CH 1/16W 5. 6K | 1 | |
| R511 | ERJ3GEYJ273 | M. RESISTOR CH 1/16W 27K | 1 | |
| R512 | ERJ3GEYJ182 | M. RESISTOR CH 1/16W 1. 8K | 1 | |
| R513 | ERJ3GEYG822 | M. RESISTOR CH1/16W 8. 2K | 1 | |
| R514 | ERJ3GEYJ224 | M. RESISTOR CH 1/16W 220K | 1 | |
| R515 | ERJ3GEYJ821 | M. RESISTOR CH 1/16W 820 | 1 | |
| R516 | ERJ3GEYJ680 | M. RESISTOR CH 1/16W 68 | 1 | |
| R517 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R518 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R519 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R520 | ERJ3GEYJ331 | M. RESISTOR CH 1/16W 330 | 1 | |
| R521-23 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 3 | |
| R524 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R526 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R527 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R528 | ERJ3GEYJ123 | M. RESISTOR CH 1/16W 12K | 1 | |
| R529 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R530 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R531, 32 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 2 | |
| R533 | ERJ6GEYG221 | M. RESISTOR CH 1/10W 220 | 1 | |
| R534 | ERJ3GEYG822 | M. RESISTOR CH1/16W 8. 2K | 1 | |
| R535 | ERJ3GEYJ562 | M. RESISTOR CH 1/16W 5. 6K | 1 | |
| R536 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R537 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R538 | ERJ3GEYJ272 | M. RESISTOR CH 1/16W 2. 7K | 1 | |
| R2000 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R2001 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R2002 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R2003 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R2004-07 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 4 | |
| R2008 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R2009 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R2010 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R2011 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R2012-15 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 4 | |
| R2016 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R2018 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R2020 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R2023-25 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 3 | |
| R2026, 27 | ERJ3GEYJ272 | M. RESISTOR CH 1/16W 2. 7K | 2 | |
| R2028, 29 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 2 | |
| R2031, 32 | ERJ3GEYG471 | M. RESISTOR CH 1/16W 470 | 2 | |
| R2038 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 1 | |
| R2039 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R2041-43 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 3 | |
| R2044 | ERJ3GEYJ563 | M. RESISTOR CH 1/16W 56K | 1 | |
| R2045, 46 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 2 | |
| R2047 | ERJ3GEYJ563 | M. RESISTOR CH 1/16W 56K | 1 | |
| R2048 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R2049, 50 | ERJ3GEYJ221 | M. RESISTOR CH 1/16W 220 | 2 | |
| | | | | |
| TG1 | EYF6CU | TEST POINT | 1 | |
| TG300 | EYF6CU | TEST POINT | 1 | |
| TG500 | EYF6CU | TEST POINT | 1 | |
| | | | | |
| TH500 | ERTD2FHL103S | THERMISTOR 10K | 1 | |
| | | | | |
| VR200 | EVM7JGA00B13 | V. RESISTOR 1K | 1 | |
| VR400, 01 | EVM7JGA00B23 | V. RESISTOR 2K | 2 | |
| | | | | |
| | | MISCELLANEOUS | | |
| | | | | |
| | VSC4374 | SHIELD CASE (UPPER) | 1 | |
| | VSC4375 | SHIELD CASE (LOWER) | 1 | |

VEP03B96B

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| ■ | VEP03B96B | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | VIDEO MAIN | | |
| | | | | |
| | | | | |
| C1 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C2 | VCK0151 | C. CAPACITOR | 1 | |
| C3, C4 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C5 | ECEV0GV470Q | E. CAPACITOR CH 4V 47U | 1 | |
| C8 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C9 | VCK0152 | C. CAPACITOR | 1 | |
| C11 | VCK0152 | C. CAPACITOR | 1 | |
| C13 | VCK0152 | C. CAPACITOR | 1 | |
| C16, 17 | VCK0152 | C. CAPACITOR | 2 | |
| C19 | VCK0152 | C. CAPACITOR | 1 | |
| C21 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C22, 23 | ECUX1H050CCV | C. CAPACITOR CH 50V 5P | 2 | |
| C24 | VCK0152 | C. CAPACITOR | 1 | |
| C25 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C26 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C32, 33 | VCK0151 | C. CAPACITOR | 2 | |
| C34 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C35 | VCK0151 | C. CAPACITOR | 1 | |
| C38 | ECUX1H102JV | C. CAPACITOR CH 50V 1000P | 1 | |
| C39, 40 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C41 | ECST1AX106Z | T. CAPACITOR CH 10V 10U | 1 | |
| C42, 43 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C44 | VCK0151 | C. CAPACITOR | 1 | |
| C45, 46 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C47 | ECST1AX106Z | T. CAPACITOR CH 10V 10U | 1 | |
| C48 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C49 | ECUX1H180JCV | C. CAPACITOR CH 50V 18P | 1 | |
| C50 | ECUX1H682KBV | C. CAPACITOR CH 50V 6800P | 1 | |
| C51-53 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C54 | ECEV0GV470Q | E. CAPACITOR CH 4V 47U | 1 | |
| C66 | VCK0151 | C. CAPACITOR | 1 | |
| C86 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C87 | ECEV0GV470Q | E. CAPACITOR CH 4V 47U | 1 | |
| C90, 91 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C92 | ECEV0JV470Q | E. CAPACITOR CH6. 3V 47U | 1 | |
| C93, 94 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C95 | ECEV0GV470Q | E. CAPACITOR CH 4V 47U | 1 | |
| C96 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C97 | ECEV0GV470Q | E. CAPACITOR CH 4V 47U | 1 | |
| C98 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C99 | ECUX1H470JCV | C. CAPACITOR CH 50V 47P | 1 | |
| C100 | ECUX1H101JCV | C. CAPACITOR CH 50V 100P | 1 | |
| C101 | ECUX1H222KBV | C. CAPACITOR CH 50V 2200P | 1 | |
| C103 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C104 | VCK0150 | C. CAPACITOR | 1 | |
| C105 | ECUX1H060DCV | C. CAPACITOR CH 50V 6P | 1 | |
| C106 | ECUX1H050CCV | C. CAPACITOR CH 50V 5P | 1 | |
| C141 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C146 | VCK0152 | C. CAPACITOR | 1 | |
| C147 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C148 | ECEV0GV470Q | E. CAPACITOR CH 4V 47U | 1 | |
| C501, 02 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C504 | ECUX1H150JCV | C. CAPACITOR CH 50V 15P | 1 | |
| C505 | ECUX1H120JCV | C. CAPACITOR CH 50V 12P | 1 | |
| C506 | VCK0152 | C. CAPACITOR | 1 | |
| C508 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C509, 10 | ECUX1H681JV | C. CAPACITOR CH 50V 680P | 2 | |
| | | | | |
| FGD1 | ERJ6GEY0R00 | M. RESISTOR CH 1/10W 0 | 1 | |
| | | | | |
| FL1 | VLF1118 | FILTER | 1 | |
| | | | | |
| IC1 | MN67372A | IC | 1 | |
| IC2 | MN4707F | IC | 1 | |
| IC3 | MN67371F | IC | 1 | |
| IC4 | L7A1433 | IC | 1 | |
| IC5 | L7A1434 | IC | 1 | |
| IC6 | XC62AP2302PL | IC | 1 | |
| IC7 | TC7SH08FU | IC | 1 | |
| IC9 | TCVHC125FS | IC | 1 | |
| IC10 | TC7S66FU | IC | 1 | |
| IC11 | M65401FP | IC | 1 | |
| IC12 | TC7W04FU | IC | 1 | |
| IC13 | M52660FP | IC | 1 | |
| IC14 | TCVHC125FS | IC | 1 | |
| IC16 | MB81V4260S7 | IC | 1 | |
| IC19 | XC62AP3002P | IC | 1 | |
| IC22 | MB88344PFV | IC | 1 | |
| IC23 | XC62AP5002ML | IC | 1 | |
| IC24 | UPC2384GA | IC | 1 | |
| IC25 | TC7SH08FU | IC | 1 | |
| IC33 | T160G11-1233 | IC | 1 | |
| IC36 | TCVHC08FS | IC | 1 | |
| IC37 | TC7SH08FU | IC | 1 | |
| IC501 | M37709E4LGP | IC | 1 | |
| IC502 | S80727ANDQ | IC | 1 | |
| IC503 | TC7SH08FU | IC | 1 | |
| | | | | |
| L1 | VLP0145 | COIL | 1 | |
| L3-11 | VLP0155 | COIL | 9 | |
| L12 | VLQ0464K6R8 | COIL 6. 8UH | 1 | |
| L13-16 | VLP0155 | COIL | 4 | |
| L23 | VLQ0464K6R8 | COIL 6. 8UH | 1 | |
| L25 | VLQ0464K6R8 | COIL 6. 8UH | 1 | |
| L26 | VLQ0319K101 | COIL 100UH | 1 | |
| L29 | VLP0155 | COIL | 1 | |
| L30 | ELJNA1R5JF | COIL 1. 5UH | 1 | |
| L34 | VLQ0319K101 | COIL 100UH | 1 | |
| L42 | VLP0145 | COIL | 1 | |
| L44 | VLQ0464K6R8 | COIL 6. 8UH | 1 | |
| L501 | VLQ0464K6R8 | COIL 6. 8UH | 1 | |
| L502 | VLP0155 | COIL | 1 | |
| | | | | |
| P1 | VJP3808E140 | CONNECTOR (MALE) | 1 | |
| P2 | VJP3798A060B | CONNECTOR (MALE) | 1 | |
| | | | | |
| QR1 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| | | | | |
| R27 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R31 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R34 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R41 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R42 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R47 | ERJ3GEYJ105 | M. RESISTOR CH 1/16W 1M | 1 | |
| R52, 53 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R54 | ERJ3GEYJ563 | M. RESISTOR CH 1/16W 56K | 1 | |
| R56 | ERJ3GEYJ563 | M. RESISTOR CH 1/16W 56K | 1 | |
| R58 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R60 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R61 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R66, 67 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R68 | ERJ3GEYJ105 | M. RESISTOR CH 1/16W 1M | 1 | |
| R71 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R72 | ERJ3GEYJ272 | M. RESISTOR CH 1/16W 2. 7K | 1 | |
| R73 | ERJ3GEYJ391 | M. RESISTOR CH 1/16W 390 | 1 | |
| R110-12 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 3 | |
| R113-15 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 3 | |
| R116 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R117 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R118 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R124 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R125 | ERJ3GEYJ221 | M. RESISTOR CH 1/16W 220 | 1 | |
| R127-29 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 3 | |
| R183 | ERJ6GEY0R00 | M. RESISTOR CH 1/10W 0 | 1 | |
| R184 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R186, 87 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R190 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R195 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R196, 97 | ERJ3GEYG471 | M. RESISTOR CH 1/16W 470 | 2 | |
| R205, 06 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R211-18 | EXB24VR000 | RESISTOR-RESISTOR | 8 | |
| R219 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R222 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R223, 24 | ERJ8GCY0R00 | M. RESISTOR CH 1/8W 0 | 2 | |
| R227 | VRE0071E270 | M. RESISTOR CH1/16W 27 | 1 | |

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| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R501, 02 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 2 | |
| R503, 04 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 2 | |
| R506 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R507, 08 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R509 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R510 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R512 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R513, 14 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 2 | |
| R515, 16 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 2 | |
| R517 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R518 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R519, 20 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R521 | ERJ3GEYJ105 | M. RESISTOR CH 1/16W 1M | 1 | |
| R522, 23 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R524-26 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 3 | |
| R528 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R530 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R532 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R533-40 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 8 | |
| R541, 42 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 2 | |
| R543 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R544 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R546, 47 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| | | | | |
| X1 | VSX0645 | CRYSTAL OSCILLATOR | 1 | |
| X501 | VSX0637 | CRYSTAL OSCILLATOR | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|

## VEP01643A

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| ■ | VEP01643A | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | POWER | | |
| | | | | |
| | | | | |
| | | | | |
| C1001 | VCEA1DAP680 | E. CAPACITOR 20V 68U | 1 | |
| C1002 | VCEA1DAP101 | E. CAPACITOR 20V 100U | 1 | |
| C1004 | ECUM1C224KBM | C. CAPACITOR CH 16V 0. 22U | 1 | |
| C1005 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C1006 | ECUM1C334KBM | C. CAPACITOR CH 16V 0. 33U | 1 | |
| C1007 | VCEA1DAP680 | E. CAPACITOR 20V 68U | 1 | |
| C1010 | VCEA1AAP221 | E. CAPACITOR 10V 220U | 1 | |
| C1011 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C1014 | ECUX1H102JV | C. CAPACITOR CH 50V 1000P | 1 | |
| C1015 | ECUM1H122KBN | C. CAPACITOR CH 50V 1200P | 1 | |
| C1016 | ECUX1C333KBV | C. CAPACITOR CH 16V 0. 033U | 1 | |
| C1017 | ECUM1H682KBN | C. CAPACITOR CH 50V 6800P | 1 | |
| C1018 | VCEA1DAP680 | E. CAPACITOR 20V 68U | 1 | |
| C1019 | ECUM1H333KBN | C. CAPACITOR CH 50V 0. 033U | 1 | |
| C1024 | ECUX1H681JV | C. CAPACITOR CH 50V 680P | 1 | |
| C1025 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C1026 | ECUX1H471JCV | C. CAPACITOR CH 50V 470P | 1 | |
| C1027, 28 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C1030 | ECUX1H471JCV | C. CAPACITOR CH 50V 470P | 1 | |
| C1031 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C1032 | ECUX1H681JV | C. CAPACITOR CH 50V 680P | 1 | |
| C1033 | VCEA1DAP680 | E. CAPACITOR 20V 68U | 1 | |
| C1034 | VCEA1AAP101 | E. CAPACITOR 10V 100U | 1 | |
| C1036 | VCEA0JSC220M | E. CAPACITOR 6. 3V 22U | 1 | |
| C1038 | VCEA0JSC220M | E. CAPACITOR 6. 3V 22U | 1 | |
| C1040 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C1041 | ECUX1H471JCV | C. CAPACITOR CH 50V 470P | 1 | |
| C1042 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C1044 | ECUX1H681JV | C. CAPACITOR CH 50V 680P | 1 | |
| C1045 | ECUX1H471JCV | C. CAPACITOR CH 50V 470P | 1 | |
| C1046 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C1047 | VCEA1DAP680 | E. CAPACITOR 20V 68U | 1 | |
| C1048 | VCEA1AAP101 | E. CAPACITOR 10V 100U | 1 | |
| C1050 | VCEA1DAP680 | E. CAPACITOR 20V 68U | 1 | |
| C1051 | VCEA1AAP101 | E. CAPACITOR 10V 100U | 1 | |
| C1053 | ECUX1H681JV | C. CAPACITOR CH 50V 680P | 1 | |
| C1054 | ECUM1H123KBV | C. CAPACITOR CH 50V 0. 012U | 1 | |
| C1056, 57 | VCEA1DAP680 | E. CAPACITOR 20V 68U | 2 | |
| C1059 | VCEA0JSC220M | E. CAPACITOR 6. 3V 22U | 1 | |
| C1062 | ECEV0JV220Q | E. CAPACITOR CH6. 3V 22U | 1 | |
| C1063 | ECUX1H101JCV | C. CAPACITOR CH 50V 100P | 1 | |
| C1064-66 | VCEA0JSC100M | E. CAPACITOR 6. 3V 10U | 3 | |
| C1067 | VCEA1CAP101 | E. CAPACITOR 16V 100U | 1 | |
| C1070 | VCEA1DAP680 | E. CAPACITOR 20V 68U | 1 | |
| C1071 | VCEA1AAP101 | E. CAPACITOR 10V 100U | 1 | |
| C1074 | ECEA1CU101 | E. CAPACITOR 16V 100U | 1 | |
| C1080, 81 | VCEA1AAP101 | E. CAPACITOR 10V 100U | 2 | |
| C1093 | ECUX1H331JCV | C. CAPACITOR CH 50V 330P | 1 | |
| C1094 | ECA1EFQ221 | E. CAPACITOR 25V 220U | 1 | |
| C1095 | VCEA1CAP101 | E. CAPACITOR 16V 100U | 1 | |
| C1096, 97 | VCEA0JAP151 | E. CAPACITOR 6. 3V 150U | 2 | |
| C1098 | ECA1EFQ221 | E. CAPACITOR 25V 220U | 1 | |
| C1099 | VCEA1CAP101 | E. CAPACITOR 16V 100U | 1 | |
| C1100, 01 | VCEA0JAP151 | E. CAPACITOR 6. 3V 150U | 2 | |
| C1102 | ECEV1EV100Q | E. CAPACITOR CH 25V 10U | 1 | |
| C1103 | ECUM1H333KBN | C. CAPACITOR CH 50V 0. 033U | 1 | |
| | | | | |
| D1003 | NSQ03A04 | DIODE | 1 | |
| D1005 | SFPB-76V | DIODE | 1 | |
| D1008-11 | NSQ03A04 | DIODE | 4 | |
| D1012 | MA142WK | DIODE | 1 | |
| D1013 | MA8062-M | DIODE | 1 | |
| D1016 | MA8100-M | DIODE | 1 | |
| D1017 | MA8062-M | DIODE | 1 | |
| D1018 | MA8036-H | DIODE | 1 | |
| D1019 | MA8056-M | DIODE | 1 | |
| D1030-32 | SFPB-76V | DIODE | 3 | |
| D1033 | MA739 | DIODE | 1 | |
| D1035, 36 | MA8043-M | DIODE | 2 | |
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| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| D1037-41 | MA8068-H | DIODE | 5 | |
| | | | | |
| IC1001-03 | TL1451CNS | IC | 3 | |
| | | | | |
| L1001, 02 | VLQ0642 | COIL | 2 | |
| L1003, 04 | VLQ0765 | COIL | 2 | |
| L1005 | VLQ0504220M | COIL 22UH | 1 | |
| L1006-11 | VLQ0441K1R0 | COIL 1. 0UH | 6 | |
| L1012 | VLQ0417 | COIL 10UH | 1 | |
| L1015 | VLQ0417 | COIL 10UH | 1 | |
| L1016 | VLQ0441K1R0 | COIL 1. 0UH | 1 | |
| L1017, 18 | VLQ0417 | COIL 10UH | 2 | |
| L1019 | VLQ0642 | COIL | 1 | |
| L1020 | ELELN560KA | COIL | 1 | |
| L1021-24 | VLQ0417 | COIL 10UH | 4 | |
| L1026 | VLQ0319K100 | COIL 10UH | 1 | |
| | | | | |
| P1001 | VJP1231T | CONNECTOR (MALE) 4P | 1 | |
| P1002 | VJP3808A060 | CONNECTOR (MALE) | 1 | |
| | | | | |
| Q1001 | 2SJ279S | TRANSISTOR | 1 | |
| Q1002 | 2SK1748-Z | TRANSISTOR | 1 | |
| Q1003-06 | 2SJ279S | TRANSISTOR | 4 | |
| Q1007 | 2SD1820A-R | TRANSISTOR | 1 | |
| Q1008 | 2SB1219A-R | TRANSISTOR | 1 | |
| Q1009 | 2SD1820A-R | TRANSISTOR | 1 | |
| Q1010 | 2SB1219A-R | TRANSISTOR | 1 | |
| Q1013 | 2SD1820A-R | TRANSISTOR | 1 | |
| Q1014 | 2SB1219A-R | TRANSISTOR | 1 | |
| Q1015 | 2SD1820A-R | TRANSISTOR | 1 | |
| Q1016 | 2SB1219A-R | TRANSISTOR | 1 | |
| Q1017 | 2SD1820A-R | TRANSISTOR | 1 | |
| Q1018 | 2SB1219A-R | TRANSISTOR | 1 | |
| Q1019 | 2SD1820A-R | TRANSISTOR | 1 | |
| Q1020 | 2SB1219A-R | TRANSISTOR | 1 | |
| Q1022 | 2SB1219A-R | TRANSISTOR | 1 | |
| Q1023 | XN2401 | TRANSISTOR-RESISTOR | 1 | |
| Q1024 | 2SD1820A-R | TRANSISTOR | 1 | |
| | | | | |
| QR1001 | UN5111 | TRANSISTOR-RESISTOR | 1 | |
| | | | | |
| R1001, 02 | ERJ3GEYJ183 | M. RESISTOR CH 1/16W 18K | 2 | |
| R1005, 06 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 2 | |
| R1007 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R1010 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R1011 | ERJ3GEYJ560 | M. RESISTOR CH 1/16W 56 | 1 | |
| R1012 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R1013, 14 | ERJ3GEYJ183 | M. RESISTOR CH 1/16W 18K | 2 | |
| R1017 | ERJ3GEYJ183 | M. RESISTOR CH 1/16W 18K | 1 | |
| R1018 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R1019 | ERJ3GEYJ182 | M. RESISTOR CH 1/16W 1. 8K | 1 | |
| R1020 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R1021 | ERJ3GEYJ563 | M. RESISTOR CH 1/16W 56K | 1 | |
| R1022 | ERJ3GEYJ333 | M. RESISTOR CH 1/16W 33K | 1 | |
| R1023 | ERJ3GEYJ560 | M. RESISTOR CH 1/16W 56 | 1 | |
| R1024 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R1025 | ERJ8GCYJ472 | M. RESISTOR CH 1/8W 4. 7K | 1 | |
| R1031 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R1032, 33 | ERJ3GEYJ183 | M. RESISTOR CH 1/16W 18K | 2 | |
| R1036 | ERJ3GEYJ563 | M. RESISTOR CH 1/16W 56K | 1 | |
| R1037 | ERJ3GEYG822 | M. RESISTOR CH1/16W 8. 2K | 1 | |
| R1038 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R1039 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R1040 | ERJ3GEYJ560 | M. RESISTOR CH 1/16W 56 | 1 | |
| R1041 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R1042, 43 | ERJ3GEYJ183 | M. RESISTOR CH 1/16W 18K | 2 | |
| R1046, 47 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 2 | |
| R1048, 49 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 2 | |
| R1050 | ERJ3GEYJ560 | M. RESISTOR CH 1/16W 56 | 1 | |
| R1051 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R1052, 53 | ERJ3GEYJ183 | M. RESISTOR CH 1/16W 18K | 2 | |
| R1056 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R1057 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R1058 | ERJ3GEYJ182 | M. RESISTOR CH 1/16W 1. 8K | 1 | |
| R1059 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
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| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R1060 | ERJ3GEYJ560 | M. RESISTOR CH 1/16W 56 | 1 | |
| R1061 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R1062, 63 | ERJ3GEYJ183 | M. RESISTOR CH 1/16W 18K | 2 | |
| R1066 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R1067 | ERJ3GEYJ123 | M. RESISTOR CH 1/16W 12K | 1 | |
| R1068, 69 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 2 | |
| R1070 | ERJ3GEYJ560 | M. RESISTOR CH 1/16W 56 | 1 | |
| R1071 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R1073 | VRE0071E682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R1077 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R1078, 79 | ERW2PKR10 | W. RESISTOR 2W 0. 1 | 2 | |
| R1080 | VRE0071E391 | M. RESISTOR CH 1/10W 390 | 1 | |
| R1081 | VRE0071E681 | M. RESISTOR CH 1/10W 680 | 1 | |
| R1082 | VRE0071E103 | M. RESISTOR CH 1/10W 10K | 1 | |
| R1083 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R1093 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R1096 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R1099 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R1102 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R1118 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R1119 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R1120 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R1129 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R1143 | ERJ3GEYJ121 | M. RESISTOR CH 1/16W 120 | 1 | |
| R1144 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R1145 | ERJ3GEYJ820 | M. RESISTOR CH 1/16W 82 | 1 | |
| R1146, 47 | ERJ3GEYJ680 | M. RESISTOR CH 1/16W 68 | 2 | |
| R1158 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| | | | | |
| T1001 | VTP0486 | TRANSFORMER | 1 | |
| | | | | |
| TG1001, 02 | EYF6CU | TEST POINT | 2 | |
| | | | | |
| VR1001 | EVM7JGA00B52 | V. RESISTOR 500 | 1 | |
| VR1002-06 | EVM7JGA00B23 | V. RESISTOR 2K | 5 | |
| | | | | |
| | | MISCELLANEOUS | | |
| | | | | |
| | VSC4372 | SHIELD CASE (UPPER) | 1 | |
| | VSC4373 | SHIELD CASE (LOWER) | | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|

## VEP04522B

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| ■ | VEP04522B | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | AUDIO LCD | | |
| | | | | |
| | | | | |
| | | | | |
| C4001 | ECA1CM471 | E. CAPACITOR 16V 470U | 1 | |
| C4002 | ECEV1CV470Q | E. CAPACITOR CH 16V 47U | 1 | |
| C4003-06 | ECEV0JV470Q | E. CAPACITOR CH6. 3V 47U | 4 | |
| C4007 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C4008 | ECEV0JV101Q | E. CAPACITOR CH6. 3V 100U | 1 | |
| C4009-11 | ECEV1CV100Q | E. CAPACITOR CH 16V 10U | 3 | |
| C4012-17 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 6 | |
| C4018, 19 | ECHU1H102JB | P. CAPACITOR 50V 1000P | 2 | |
| C4020, 21 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C4022 | ECEV1CV100Q | E. CAPACITOR CH 16V 10U | 1 | |
| C4023 | ECUM1C105KBM | C. CAPACITOR CH 16V 1U | 1 | |
| C4024, 25 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C4027 | ECEV0GV470Q | E. CAPACITOR CH 4V 47U | 1 | |
| C4028 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C4029 | ECEV1CV100Q | E. CAPACITOR CH 16V 10U | 1 | |
| C4030 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C4031 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C4032, 33 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C4034 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C4035-37 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 3 | |
| C4039, 40 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C4041 | ECEV1CV100Q | E. CAPACITOR CH 16V 10U | 1 | |
| C4042 | ECEV0JV101Q | E. CAPACITOR CH6. 3V 100U | 1 | |
| C4043 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C4044 | ECEV1CV470Q | E. CAPACITOR CH 16V 47U | 1 | |
| C4045 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C4046 | ECEV1CV470Q | E. CAPACITOR CH 16V 47U | 1 | |
| C4047, 48 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C4049, 50 | ECUX1H471JCV | C. CAPACITOR CH 50V 470P | 2 | |
| C4051, 52 | ECEV1HN010Q | E. CAPACITOR CH 50V 1U | 2 | |
| C4053 | ECUM1H104KBM | C. CAPACITOR CH 50V 0. 1U | 1 | |
| C4054 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C4055 | ECUM1H563KBN | C. CAPACITOR 50V 0. 056U | 1 | |
| C4056 | ECEV0JV470Q | E. CAPACITOR CH6. 3V 47U | 1 | |
| C4101 | ECEV1CV470Q | E. CAPACITOR CH 16V 47U | 1 | |
| C4102, 03 | ECUM1H273KBN | C. CAPACITOR CH 50V 0. 027U | 2 | |
| C4106 | ECUM1H183KBN | C. CAPACITOR CH 50V 0. 018U | 1 | |
| C4107, 08 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C4109 | ECEV0JN470Q | E. CAPACITOR CH6. 3V 47U | 1 | |
| C4114, 15 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C4116, 17 | ECEV0JN100Q | E. CAPACITOR CH6. 3V 10U | 2 | |
| C4118 | ECEV0JV220Q | E. CAPACITOR CH6. 3V 22U | 1 | |
| C4119 | ECEV1CV100Q | E. CAPACITOR CH 16V 10U | 1 | |
| C4126, 27 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C4128 | ECHU1C472JB | P. CAPACITOR 16V 4700P | 1 | |
| C4129 | ECUX1H330JCV | C. CAPACITOR CH 50V 33P | 1 | |
| C4130 | ECEV0GV470Q | E. CAPACITOR CH 4V 47U | 1 | |
| C4131 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C4132 | ECEV0JV220Q | E. CAPACITOR CH6. 3V 22U | 1 | |
| C4133 | ECEV0GV470Q | E. CAPACITOR CH 4V 47U | 1 | |
| C4134 | ECUX1H222KBV | C. CAPACITOR CH 50V 2200P | 1 | |
| C4137 | ECEV0JV220Q | E. CAPACITOR CH6. 3V 22U | 1 | |
| C4138 | ECUX1H151JCV | C. CAPACITOR CH 50V 150P | 1 | |
| C4139 | ECEV0JV220Q | E. CAPACITOR CH6. 3V 22U | 1 | |
| C4140 | ECUX1H151JCV | C. CAPACITOR CH 50V 150P | 1 | |
| C4141 | ECUX1H102JV | C. CAPACITOR CH 50V 1000P | 1 | |
| C4142 | ECUX1H221JCV | C. CAPACITOR CH 50V 220P | 1 | |
| C4152 | ECEV1CV100Q | E. CAPACITOR CH 16V 10U | 1 | |
| C4153 | ECUM1C105ZFN | C. CAPACITOR CH 16V 1U | 1 | |
| C4155 | ECUX1H330JCV | C. CAPACITOR CH 50V 33P | 1 | |
| C4157 | ECUM1C105KBM | C. CAPACITOR CH 16V 1U | 1 | |
| C4158 | ECEV0GV101Q | E. CAPACITOR CH 4V 100U | 1 | |
| C4159 | ECEV0GV470Q | E. CAPACITOR CH 4V 47U | 1 | |
| C4160, 61 | ECUX1H471JCV | C. CAPACITOR CH 50V 470P | 2 | |
| C4162-65 | ECEV1HN010Q | E. CAPACITOR CH 50V 1U | 4 | |
| C4166 | ECUM1H104KBM | C. CAPACITOR CH 50V 0. 1U | 1 | |
| C4167 | ECUX1H151JCV | C. CAPACITOR CH 50V 150P | 1 | |
| C4168, 69 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C4170 | ECUM1C224ZFV | C. CAPACITOR CH 16V 0. 22U | 1 | |
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| | | | | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| C4201 | ECEV1CV470Q | E. CAPACITOR CH 16V 47U | 1 | |
| C4202, 03 | ECUM1H273KBN | C. CAPACITOR CH 50V 0. 027U | 2 | |
| C4206 | ECUM1H183KBN | C. CAPACITOR CH 50V 0. 018U | 1 | |
| C4207, 08 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C4209 | ECEV0JN470Q | E. CAPACITOR CH6. 3V 47U | 1 | |
| C4214, 15 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C4216, 17 | ECEV0JN100Q | E. CAPACITOR CH6. 3V 10U | 2 | |
| C4218 | ECEV0JV220Q | E. CAPACITOR CH6. 3V 22U | 1 | |
| C4219 | ECEV1CV100Q | E. CAPACITOR CH 16V 10U | 1 | |
| C4226, 27 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C4228 | ECHU1C472JB | P. CAPACITOR 16V 4700P | 1 | |
| C4229 | ECUX1H330JCV | C. CAPACITOR CH 50V 33P | 1 | |
| C4230 | ECEV0GV470Q | E. CAPACITOR CH 4V 47U | 1 | |
| C4231 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C4232 | ECEV0JV220Q | E. CAPACITOR CH6. 3V 22U | 1 | |
| C4233 | ECEV0GV470Q | E. CAPACITOR CH 4V 47U | 1 | |
| C4234 | ECUX1H222KBV | C. CAPACITOR CH 50V 2200P | 1 | |
| C4237 | ECEV0JV220Q | E. CAPACITOR CH6. 3V 22U | 1 | |
| C4238 | ECUX1H151JCV | C. CAPACITOR CH 50V 150P | 1 | |
| C4239 | ECEV0JV220Q | E. CAPACITOR CH6. 3V 22U | 1 | |
| C4240 | ECUX1H151JCV | C. CAPACITOR CH 50V 150P | 1 | |
| C4241 | ECUX1H102JV | C. CAPACITOR CH 50V 1000P | 1 | |
| C4242 | ECUX1H221JCV | C. CAPACITOR CH 50V 220P | 1 | |
| C4252 | ECEV1CV100Q | E. CAPACITOR CH 16V 10U | 1 | |
| C4253 | ECUM1C105ZFN | C. CAPACITOR CH 16V 1U | 1 | |
| C4255 | ECUX1H330JCV | C. CAPACITOR CH 50V 33P | 1 | |
| C4257 | ECUM1C105KBM | C. CAPACITOR CH 16V 1U | 1 | |
| C4258 | ECEV0GV101Q | E. CAPACITOR CH 4V 100U | 1 | |
| C4259 | ECEV0GV470Q | E. CAPACITOR CH 4V 47U | 1 | |
| C4260, 61 | ECUX1H471JCV | C. CAPACITOR CH 50V 470P | 2 | |
| C4262-65 | ECEV1HN010Q | E. CAPACITOR CH 50V 1U | 4 | |
| C4266 | ECUM1H104KBM | C. CAPACITOR CH 50V 0. 1U | 1 | |
| C4267 | ECUX1H151JCV | C. CAPACITOR CH 50V 150P | 1 | |
| C4268, 69 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C4270 | ECUM1C224ZFV | C. CAPACITOR CH 16V 0. 22U | 1 | |
| C4304 | ECEV1CV470Q | E. CAPACITOR CH 16V 47U | 1 | |
| C4305 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C4306 | ECEV1CV470Q | E. CAPACITOR CH 16V 47U | 1 | |
| C4307 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C4308 | ECEV0JN100Q | E. CAPACITOR CH6. 3V 10U | 1 | |
| C4309 | ECUX1H331JCV | C. CAPACITOR CH 50V 330P | 1 | |
| C4408 | ECEV0JN100Q | E. CAPACITOR CH6. 3V 10U | 1 | |
| C4409 | ECUX1H331JCV | C. CAPACITOR CH 50V 330P | 1 | |
| C4501, 02 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C4508 | ECUM1C105KBM | C. CAPACITOR CH 16V 1U | 1 | |
| C4509 | ECEV1CV220Q | E. CAPACITOR CH 16V 22U | 1 | |
| C4510 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C4511 | ECEV0JV470Q | E. CAPACITOR CH6. 3V 47U | 1 | |
| C4512 | ECST1VY684Z | T. CAPACITOR CH 35V 0. 68U | 1 | |
| C4513 | ECUM1C105KBM | C. CAPACITOR CH 16V 1U | 1 | |
| C4514 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C4515 | ECEV1CV100Q | E. CAPACITOR CH 16V 10U | 1 | |
| C4516, 17 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 2 | |
| C4519 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C4520 | ECUX1H330JCV | C. CAPACITOR CH 50V 33P | 1 | |
| C4521, 22 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 2 | |
| C4523, 24 | ECUM1C105KBM | C. CAPACITOR CH 16V 1U | 2 | |
| C4602 | ECEV0JV470Q | E. CAPACITOR CH6. 3V 47U | 1 | |
| C4603 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C4604 | ECEV0JV330Q | E. CAPACITOR CH6. 3V 33U | 1 | |
| C4605 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C4606, 07 | ECUX1H150JCV | C. CAPACITOR CH 50V 15P | 2 | |
| C4608-10 | ECUX1H561JCV | C. CAPACITOR CH 50V 560P | 3 | |
| C4611 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C4612 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C4701 | ECA1EFQ820 | E. CAPACITOR 25V 82U | 1 | |
| C4702 | ECEV1HV3R3Q | E. CAPACITOR CH 50V 3. 3U | 1 | |
| C4703 | ECA1JFQ220 | E. CAPACITOR 63V 22U | 1 | |
| C4704 | ECUM1H104KBM | C. CAPACITOR CH 50V 0. 1U | 1 | |
| C4705 | ECA1JFQ220 | E. CAPACITOR 63V 22U | 1 | |
| C4707 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C4708 | ECUM1C105KBM | C. CAPACITOR CH 16V 1U | 1 | |
| C4709 | ECEV1CV470Q | E. CAPACITOR CH 16V 47U | 1 | |
| C4710 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C4711 | ECEV1CV470Q | E. CAPACITOR CH 16V 47U | 1 | |
| | | | | |
| | | | | |

| Ref.No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| C4712,13 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 2 | |
| C6502 | ECEV0JV470Q | E.CAPACITOR CH6.3V 47U | 1 | |
| C6503 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 1 | |
| C6504 | ECUM1C105KBM | C.CAPACITOR CH 16V 1U | 1 | |
| C6505-07 | ECUX1E104ZFV | C.CAPACITOR CH 25V 0.1U | 3 | |
| C6508 | ECUX1H103KBV | C.CAPACITOR CH 50V 0.01U | 1 | |
| C6509 | ECEV0JV330Q | E.CAPACITOR CH6.3V 33U | 1 | |
| C6510,11 | ECUX1H220JCV | C.CAPACITOR CH 50V 22P | 2 | |
| C6512,13 | ECUX1H150JCV | C.CAPACITOR CH 50V 15P | 2 | |
| C6524 | ECEV0JV101Q | E.CAPACITOR CH6.3V 100U | 1 | |
| C6525 | ECEV1EV220Q | E.CAPACITOR CH 25V 22U | 1 | |
| C6526-28 | ECEV0JV101Q | E.CAPACITOR CH6.3V 100U | 3 | |
| | | | | |
| D4001,02 | MA143 | DIODE | 2 | |
| D4003 | MA142K | DIODE | 1 | |
| D4004 | MA143 | DIODE | 1 | |
| D4101,02 | MA143 | DIODE | 2 | |
| D4103 | MA142K | DIODE | 1 | |
| D4105,06 | MA142K | DIODE | 2 | |
| D4107 | MA714 | DIODE | 1 | |
| D4201,02 | MA143 | DIODE | 2 | |
| D4203 | MA142K | DIODE | 1 | |
| D4205,06 | MA142K | DIODE | 2 | |
| D4207 | MA714 | DIODE | 1 | |
| D4601 | MA142K | DIODE | 1 | |
| D4604,05 | MA714 | DIODE | 2 | |
| D4606 | MA142K | DIODE | 1 | |
| D4701 | E10QS10 | DIODE | 1 | |
| D4702 | MA143 | DIODE | 1 | |
| D4703 | MA714 | DIODE | 1 | |
| D6501 | MA704 | DIODE | 1 | |
| D6502-07 | LNJ310M6URA | DIODE | 6 | |
| D6508 | HZ16-1L | DIODE | 1 | |
| D6509,10 | LNJ310M6URA | DIODE | 2 | |
| D6511,12 | MA142K | DIODE | 2 | |
| D6513 | BR3902S | DIODE | 1 | |
| D6514-28 | MA142K | DIODE | 15 | |
| D6530-40 | MA142K | DIODE | 11 | |
| D6541,42 | LNJ310M6URA | DIODE | 2 | |
| D6543,44 | MA142K | DIODE | 2 | |
| | | | | |
| DP6501 | EDD074YG1A4P | LCD | 1 | |
| | | | | |
| FL4501 | VLF1069 | FILTER | 1 | |
| | | | | |
| IC4001 | UPC5022GA121 | IC | 1 | |
| IC4002 | NJM062M-D | IC | 1 | |
| IC4003 | MC74HCU04F | IC | 1 | |
| IC4004 | MC14053BF | IC | 1 | |
| IC4005 | NJM2904M | IC | 1 | |
| IC4006 | NJM062M-D | IC | 1 | |
| IC4007 | XC62AP3002P | IC | 1 | |
| IC4008 | AK4503VF | IC | 1 | |
| IC4009 | BA6138F | IC | 1 | |
| IC4010 | NJM062M-D | IC | 1 | |
| IC4011 | MC14052BF | IC | 1 | |
| IC4012 | MC14053BF | IC | 1 | |
| IC4013 | NJM2073M | IC | 1 | |
| IC4014 | TC7W125FU | IC | 1 | |
| IC4015-17 | NJM062M-D | IC | 3 | |
| IC4102 | NJM062M-D | IC | 1 | |
| IC4103 | NJM4580ED | IC | 1 | |
| IC4105 | MC14052BF | IC | 1 | |
| IC4202 | NJM062M-D | IC | 1 | |
| IC4203 | NJM4580ED | IC | 1 | |
| IC4205 | MC14052BF | IC | 1 | |
| IC4501 | MC14053BF | IC | 1 | |
| IC4502 | NJM062M-D | IC | 1 | |
| IC4503 | CXA1102M | IC | 1 | |
| IC4602 | MN13821-R | IC | 1 | |
| IC4603 | UPD75328G742 | IC | 1 | |
| IC4701 | LM2577MX-ADJ | IC | 1 | |
| IC4702 | NJM062M-D | IC | 1 | |
| IC4703 | MC74HC08AF | IC | 1 | |
| IC4704 | NJM386M | IC | 1 | |

| Ref.No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| IC6501 | UPD75316BE58 | IC | 1 | |
| IC6502 | S8420BF | IC | 1 | |
| IC6503 | S81350HG | IC | 1 | |
| IC6505 | NJU7112AM | IC | 1 | |
| | | | | |
| L4003,04 | VLQ0163J100 | COIL 10UH | 2 | |
| L4101,02 | VLQ0163J100 | COIL 10UH | 2 | |
| L4201,02 | VLQ0163J100 | COIL 10UH | 2 | |
| L4701 | VLQ0407680K | COIL 68UH | 1 | |
| L4702 | VLQ0621 | COIL | 1 | |
| | | | | |
| P4001 | VJP3816B050 | CONNECTOR (MALE) | 1 | |
| P4002 | VJP3172D002 | CONNECTOR (MALE) | 1 | |
| P4003 | VJP1613T | CONNECTOR (MALE) | 1 | |
| P4004 | VJP1609T | CONNECTOR (MALE) | 1 | |
| P4005 | VJP3172D002 | CONNECTOR (MALE) | 1 | |
| P6501 | VJP1944T | CONNECTOR (MALE) | 1 | |
| | | | | |
| PC4001 | MCD5223 | IC | 1 | |
| | | | | |
| Q4001 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q4002 | 2SD602A-S | TRANSISTOR | 1 | |
| Q4003 | 2SB710A-R | TRANSISTOR | 1 | |
| Q4004 | 2SK663-R | TRANSISTOR | 1 | |
| Q4007 | 2SB1219-R | TRANSISTOR | 1 | |
| Q4008 | 2SB1220-R | TRANSISTOR | 1 | |
| Q4009,10 | 2SD1979 | TRANSISTOR | 2 | |
| Q4101-03 | 2SD1819A-R | TRANSISTOR | 3 | |
| Q4107 | 2SD1979 | TRANSISTOR | 1 | |
| Q4110 | 2SD1979 | TRANSISTOR | 1 | |
| Q4111 | 2SB1220-R | TRANSISTOR | 1 | |
| Q4201-03 | 2SD1819A-R | TRANSISTOR | 3 | |
| Q4207 | 2SD1979 | TRANSISTOR | 1 | |
| Q4210 | 2SD1979 | TRANSISTOR | 1 | |
| Q4211 | 2SB1220-R | TRANSISTOR | 1 | |
| Q4302 | 2SD1979 | TRANSISTOR | 1 | |
| Q4305-07 | 2SD1979 | TRANSISTOR | 3 | |
| Q4402 | 2SD1979 | TRANSISTOR | 1 | |
| Q4405-07 | 2SD1979 | TRANSISTOR | 3 | |
| Q4702,03 | 2SD1979 | TRANSISTOR | 2 | |
| Q4704 | 2SD874-R | TRANSISTOR | 1 | |
| Q4705 | 2SB766-R | TRANSISTOR | 1 | |
| Q6501,02 | 2SD968-R | TRANSISTOR | 2 | |
| Q6503 | 2SD602A-S | TRANSISTOR | 1 | |
| | | | | |
| QR4001 | UN5113 | TRANSISTOR-RESISTOR | 1 | |
| QR4006 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| QR4007 | UN5113 | TRANSISTOR-RESISTOR | 1 | |
| QR4010 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| QR4012 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| QR4013 | UN5113 | TRANSISTOR-RESISTOR | 1 | |
| QR4102,03 | UN5113 | TRANSISTOR-RESISTOR | 2 | |
| QR4104 | UN521F | TRANSISTOR-RESISTOR | 1 | |
| QR4105 | UN5113 | TRANSISTOR-RESISTOR | 1 | |
| QR4106 | UN521F | TRANSISTOR-RESISTOR | 1 | |
| QR4107 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| QR4108 | UN5113 | TRANSISTOR-RESISTOR | 1 | |
| QR4201 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| QR4202,03 | UN5113 | TRANSISTOR-RESISTOR | 2 | |
| QR4204 | UN521F | TRANSISTOR-RESISTOR | 1 | |
| QR4205 | UN5113 | TRANSISTOR-RESISTOR | 1 | |
| QR4206 | UN521F | TRANSISTOR-RESISTOR | 1 | |
| QR4207 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| QR4208 | UN5113 | TRANSISTOR-RESISTOR | 1 | |
| QR4301,02 | UN5113 | TRANSISTOR-RESISTOR | 2 | |
| QR4303,04 | UN5213 | TRANSISTOR-RESISTOR | 2 | |
| QR4401,02 | UN5113 | TRANSISTOR-RESISTOR | 2 | |
| QR4403,04 | UN5213 | TRANSISTOR-RESISTOR | 2 | |
| QR4507 | UN5113 | TRANSISTOR-RESISTOR | 1 | |
| QR4508 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| QR4601 | UN5213 | TRANSISTOR-RESISTOR | 1 | |
| QR6501 | UN5211 | TRANSISTOR-RESISTOR | 1 | |
| QR6502-04 | UN5213 | TRANSISTOR-RESISTOR | 3 | |
| | | | | |
| R4001 | ERJ3GEYJ331 | M.RESISTOR CH 1/16W 330 | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R4002 | ERJ3GEYJ330 | M.RESISTOR CH 1/16W 33 | 1 | |
| R4003 | ERJ3GEYJ331 | M.RESISTOR CH 1/16W 330 | 1 | |
| R4004,05 | ERJ3GEYG471 | M.RESISTOR CH 1/16W 470 | 2 | |
| R4006 | ERJ3GEYJ100 | M.RESISTOR CH 1/16W 10 | 1 | |
| R4011,12 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 2 | |
| R4013,14 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 2 | |
| R4015-17 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 3 | |
| R4018 | ERJ3GEYG472 | M.RESISTOR CH 1/16W 4.7K | 1 | |
| R4019 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R4031 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R4035 | ERJ3GEYJ154 | M.RESISTOR CH 1/16W 150K | 1 | |
| R4036 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 1 | |
| R4037 | ERJ3GEYG822 | M.RESISTOR CH1/16W 8.2K | 1 | |
| R4038,39 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 2 | |
| R4040 | VRE0034E164 | M.RESISTOR CH 1/10W 160K | 1 | |
| R4042 | VRE0034E164 | M.RESISTOR CH 1/10W 160K | 1 | |
| R4046 | ERJ3GEYG152 | M.RESISTOR CH 1/16W 1.5K | 1 | |
| R4047 | ERJ3GEYJ272 | M.RESISTOR CH 1/16W 2.7K | 1 | |
| R4048 | ERJ3GEYJ105 | M.RESISTOR CH 1/16W 1M | 1 | |
| R4049 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R4051 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 1 | |
| R4061,62 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 2 | |
| R4064,65 | ERJ3GEYJ100 | M.RESISTOR CH 1/16W 10 | 2 | |
| R4066 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R4068,69 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 2 | |
| R4070,71 | ERJ3GEYJ390 | M.RESISTOR CH 1/16W 39 | 2 | |
| R4073 | ERJ6GEYG392 | M.RESISTOR CH 1/10W 3.9K | 1 | |
| R4074,75 | ERJ12YJ682 | M.RESISTOR CH 1/2W 6.8K | 2 | |
| R4076 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R4077 | ERJ3GEYJ334 | M.RESISTOR CH 1/16W 330K | 1 | |
| R4079 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R4081-83 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 3 | |
| R4084,85 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 2 | |
| R4086 | ERJ3GEYJ154 | M.RESISTOR CH 1/16W 150K | 1 | |
| R4087 | ERJ3GEYG682 | M.RESISTOR CH1/16W 6.8K | 1 | |
| R4088 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R4089 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 1 | |
| R4090-93 | ERJ6GEYJ150 | M.RESISTOR CH 1/10W 15 | 4 | |
| R4094 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R4095 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R4101 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R4102 | ERJ3GEYJ183 | M.RESISTOR CH 1/16W 18K | 1 | |
| R4103 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 1 | |
| R4106 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R4110 | ERJ3GEYG822 | M.RESISTOR CH1/16W 8.2K | 1 | |
| R4111 | ERJ3GEYJ272 | M.RESISTOR CH 1/16W 2.7K | 1 | |
| R4112 | ERJ3GEYG472 | M.RESISTOR CH 1/16W 4.7K | 1 | |
| R4113 | ERJ3GEYJ470 | M.RESISTOR CH 1/16W 47 | 1 | |
| R4114 | ERJ3GEYG152 | M.RESISTOR CH 1/16W 1.5K | 1 | |
| R4115 | ERJ3GEYJ222 | M.RESISTOR CH 1/16W 2.2K | 1 | |
| R4116 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R4117 | ERJ3GEYJ392 | M.RESISTOR CH 1/16W 3.9K | 1 | |
| R4118,19 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 2 | |
| R4120 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 1 | |
| R4121 | ERJ3GEYJ155 | M.RESISTOR CH 1/16W 1.5M | 1 | |
| R4122 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R4123 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 1 | |
| R4124 | ERJ3GEYJ223 | M.RESISTOR CH 1/16W 22K | 1 | |
| R4125 | ERJ3GEYG822 | M.RESISTOR CH1/16W 8.2K | 1 | |
| R4130 | ERDS2TJ153 | C.RESISTOR 1/4W 15K | 1 | |
| R4142 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R4144 | ERJ3GEYJ683 | M.RESISTOR CH 1/16W 68K | 1 | |
| R4145 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R4146 | ERJ3GEYJ105 | M.RESISTOR CH 1/16W 1M | 1 | |
| R4147 | VRE0034E102 | M.RESISTOR CH1/10W 1K | 1 | |
| R4148 | VRE0034E222 | M.RESISTOR CH 1/10W 2.2K | 1 | |
| R4149,50 | VRE0034E153 | M.RESISTOR CH 1/10W 15K | 2 | |
| R4151,52 | VRE0034E472 | M.RESISTOR CH 1/10W 4.7K | 2 | |
| R4153,54 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 2 | |
| R4155 | ERJ3GEYG471 | M.RESISTOR CH 1/16W 470 | 1 | |
| R4160 | VRE0034E103 | M.RESISTOR CH1/10W 10K | 1 | |
| R4161 | VRE0034E153 | M.RESISTOR CH 1/10W 15K | 1 | |
| R4162 | VRE0034E103 | M.RESISTOR CH1/10W 10K | 1 | |
| R4163 | VRE0034E153 | M.RESISTOR CH 1/10W 15K | 1 | |
| R4164-66 | VRE0034E103 | M.RESISTOR CH1/10W 10K | 3 | |
| R4183 | ERJ3GEYJ334 | M.RESISTOR CH 1/16W 330K | 1 | |
| R4184 | ERJ3GEYG472 | M.RESISTOR CH 1/16W 4.7K | 1 | |
| R4185 | ERJ3GEYJ223 | M.RESISTOR CH 1/16W 22K | 1 | |
| R4186 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R4187 | ERJ3GEYG472 | M.RESISTOR CH 1/16W 4.7K | 1 | |
| R4189 | ERJ3GEYJ273 | M.RESISTOR CH 1/16W 27K | 1 | |
| R4190 | ERJ3GEYJ124 | M.RESISTOR CH 1/16W 120K | 1 | |
| R4191 | ERJ3GEYG471 | M.RESISTOR CH 1/16W 470 | 1 | |
| R4192 | ERJ6GEYJ1R0 | M.RESISTOR CH 1/10W 1 | 1 | |
| R4193-96 | ERJ6GEYJ150 | M.RESISTOR CH 1/10W 15 | 4 | |
| R4197 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R4201 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R4202 | ERJ3GEYJ183 | M.RESISTOR CH 1/16W 18K | 1 | |
| R4203 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 1 | |
| R4206 | ERJ3GEYG102 | M.RESISTOR CH 1/16W 1K | 1 | |
| R4210 | ERJ3GEYG822 | M.RESISTOR CH1/16W 8.2K | 1 | |
| R4211 | ERJ3GEYJ272 | M.RESISTOR CH 1/16W 2.7K | 1 | |
| R4212 | ERJ3GEYG472 | M.RESISTOR CH 1/16W 4.7K | 1 | |
| R4213 | ERJ3GEYJ470 | M.RESISTOR CH 1/16W 47 | 1 | |
| R4214 | ERJ3GEYG152 | M.RESISTOR CH 1/16W 1.5K | 1 | |
| R4215 | ERJ3GEYJ222 | M.RESISTOR CH 1/16W 2.2K | 1 | |
| R4216 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R4217 | ERJ3GEYJ392 | M.RESISTOR CH 1/16W 3.9K | 1 | |
| R4218,19 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 2 | |
| R4220 | ERJ3GEYJ473 | M.RESISTOR CH 1/16W 47K | 1 | |
| R4221 | ERJ3GEYJ155 | M.RESISTOR CH 1/16W 1.5M | 1 | |
| R4222 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R4223 | ERJ3GEYJ101 | M.RESISTOR CH 1/16W 100 | 1 | |
| R4224 | ERJ3GEYJ223 | M.RESISTOR CH 1/16W 22K | 1 | |
| R4225 | ERJ3GEYG822 | M.RESISTOR CH1/16W 8.2K | 1 | |
| R4226 | ERJ3GEYJ222 | M.RESISTOR CH 1/16W 2.2K | 1 | |
| R4230 | ERDS2TJ153 | C.RESISTOR 1/4W 15K | 1 | |
| R4242 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R4244 | ERJ3GEYJ683 | M.RESISTOR CH 1/16W 68K | 1 | |
| R4245 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R4246 | ERJ3GEYJ105 | M.RESISTOR CH 1/16W 1M | 1 | |
| R4247 | VRE0034E102 | M.RESISTOR CH1/10W 1K | 1 | |
| R4248 | VRE0034E222 | M.RESISTOR CH 1/10W 2.2K | 1 | |
| R4249,50 | VRE0034E153 | M.RESISTOR CH 1/10W 15K | 2 | |
| R4251,52 | VRE0034E472 | M.RESISTOR CH 1/10W 4.7K | 2 | |
| R4253,54 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 2 | |
| R4255 | ERJ3GEYG471 | M.RESISTOR CH 1/16W 470 | 1 | |
| R4260 | VRE0034E103 | M.RESISTOR CH1/10W 10K | 1 | |
| R4261 | VRE0034E153 | M.RESISTOR CH 1/10W 15K | 1 | |
| R4262 | VRE0034E103 | M.RESISTOR CH1/10W 10K | 1 | |
| R4263 | VRE0034E153 | M.RESISTOR CH 1/10W 15K | 1 | |
| R4264-66 | VRE0034E103 | M.RESISTOR CH1/10W 10K | 3 | |
| R4283 | ERJ3GEYJ334 | M.RESISTOR CH 1/16W 330K | 1 | |
| R4284 | ERJ3GEYG472 | M.RESISTOR CH 1/16W 4.7K | 1 | |
| R4285 | ERJ3GEYJ223 | M.RESISTOR CH 1/16W 22K | 1 | |
| R4286 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R4287 | ERJ3GEYG472 | M.RESISTOR CH 1/16W 4.7K | 1 | |
| R4289 | ERJ3GEYJ273 | M.RESISTOR CH 1/16W 27K | 1 | |
| R4290 | ERJ3GEYJ124 | M.RESISTOR CH 1/16W 120K | 1 | |
| R4291 | ERJ3GEYG471 | M.RESISTOR CH 1/16W 470 | 1 | |
| R4292 | ERJ6GEYJ1R0 | M.RESISTOR CH 1/10W 1 | 1 | |
| R4293-96 | ERJ6GEYJ150 | M.RESISTOR CH 1/10W 15 | 4 | |
| R4297 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R4305,06 | ERJ12YJ682 | M.RESISTOR CH 1/2W 6.8K | 2 | |
| R4307 | VRE0034E223 | M.RESISTOR CH 1/10W 22K | 1 | |
| R4308 | VRE0034E681 | M.RESISTOR CH 1/10W 680 | 1 | |
| R4309 | VRE0034E221 | M.RESISTOR CH 1/10W 220 | 1 | |
| R4310 | VRE0034E223 | M.RESISTOR CH 1/10W 22K | 1 | |
| R4312,13 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 2 | |
| R4315 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R4317 | ERJ3GEY0R00 | M.RESISTOR CH 1/16W 0 | 1 | |
| R4318 | ERJ3GEYJ104 | M.RESISTOR CH 1/16W 100K | 1 | |
| R4319 | ERJ3GEYJ334 | M.RESISTOR CH 1/16W 330K | 1 | |
| R4320 | ERJ3GEYJ470 | M.RESISTOR CH 1/16W 47 | 1 | |
| R4326 | ERJ3GEYJ151 | M.RESISTOR CH 1/16W 150 | 1 | |
| R4327 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R4328 | ERJ3GEYJ392 | M.RESISTOR CH 1/16W 3.9K | 1 | |
| R4332 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |
| R4334 | ERJ3GEYJ470 | M.RESISTOR CH 1/16W 47 | 1 | |
| R4335 | ERJ3GEYJ103 | M.RESISTOR CH 1/16W 10K | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R4336 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 1 | |
| R4337 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R4338 | ERJ3GEYG471 | M. RESISTOR CH 1/16W 470 | 1 | |
| R4339 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R4340 | ERJ3GEYJ821 | M. RESISTOR CH 1/16W 820 | 1 | |
| R4341 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R4344 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R4345 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R4405, 06 | ERJ12YJ682 | M. RESISTOR CH 1/2W 6. 8K | 2 | |
| R4407 | VRE0034E223 | M. RESISTOR CH 1/10W 22K | 1 | |
| R4408 | VRE0034E681 | M. RESISTOR CH 1/10W 680 | 1 | |
| R4409 | VRE0034E221 | M. RESISTOR CH 1/10W 220 | 1 | |
| R4410 | VRE0034E223 | M. RESISTOR CH 1/10W 22K | 1 | |
| R4412, 13 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R4415 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R4417 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R4418 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R4419 | ERJ3GEYJ334 | M. RESISTOR CH 1/16W 330K | 1 | |
| R4420 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R4426 | ERJ3GEYJ151 | M. RESISTOR CH 1/16W 150 | 1 | |
| R4427 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R4428 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R4432 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R4434 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R4435 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R4436 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 1 | |
| R4437 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R4438 | ERJ3GEYG471 | M. RESISTOR CH 1/16W 470 | 1 | |
| R4439 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R4440 | ERJ3GEYJ821 | M. RESISTOR CH 1/16W 820 | 1 | |
| R4441 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R4444 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R4445 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R4502 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R4503 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R4509 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R4510 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R4511 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R4512 | VRE0034E433 | M. RESISTOR CH 1/10W 43K | 1 | |
| R4513 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R4515 | ERJ3GEYJ563 | M. RESISTOR CH 1/16W 56K | 1 | |
| R4516 | ERJ3GEYJ273 | M. RESISTOR CH 1/16W 27K | 1 | |
| R4517 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R4524 | ERJ3GEYJ391 | M. RESISTOR CH 1/16W 390 | 1 | |
| R4525 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R4526 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R4527 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R4529, 30 | ERJ3GEYG822 | M. RESISTOR CH1/16W 8. 2K | 2 | |
| R4555, 56 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 2 | |
| R4601 | ERJ3GEYG471 | M. RESISTOR CH 1/16W 470 | 1 | |
| R4602 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R4603 | VRE0034E221 | M. RESISTOR CH 1/10W 220 | 1 | |
| R4604 | VRE0034E561 | M. RESISTOR CH 1/10W 560 | 1 | |
| R4605-39 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 35 | |
| R4640 | ERJ3GEYJ123 | M. RESISTOR CH 1/16W 12K | 1 | |
| R4643-45 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 3 | |
| R4646-48 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 3 | |
| R4649 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R4701 | VRE0034E101 | M. RESISTOR CH 1/10W 100 | 1 | |
| R4702 | ERJ6GEYJ1R0 | M. RESISTOR CH 1/10W 1 | 1 | |
| R4704 | ERJ6GEYG681 | M. RESISTOR CH 1/10W 680 | 1 | |
| R4705 | VRE0034E683 | M. RESISTOR CH 1/10W 68K | 1 | |
| R4706 | VRE0034E182 | M. RESISTOR CH 1/10W 1. 8K | 1 | |
| R4707 | ERJ8GCYG101 | M. RESISTOR CH 1/8W 100 | 1 | |
| R4708 | ERJ3GEYJ333 | M. RESISTOR CH 1/16W 33K | 1 | |
| R4710 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R4712 | ERJ3GEYJ100 | M. RESISTOR CH 1/16W 10 | 1 | |
| R4713-18 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 6 | |
| R4719, 20 | ERJ6GEYJ2R2 | M. RESISTOR CH 1/10W 2. 2 | 2 | |
| R4721-24 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 4 | |
| R4725 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R4726 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R4728 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R4802 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R4807, 08 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| | | | | |
| | | | | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R4810 | ERJ6GEY0R00 | M. RESISTOR CH 1/10W 0 | 1 | |
| R4811 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R6501 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R6502 | VRE0034E104 | M. RESISTOR CH 1/10W 100K | 1 | |
| R6503 | VRE0034E153 | M. RESISTOR CH 1/10W 15K | 1 | |
| R6504, 05 | VRE0034E563 | M. RESISTOR CH 1/10W 56K | 2 | |
| R6506 | VRE0034E472 | M. RESISTOR CH 1/10W 4. 7K | 1 | |
| R6507 | ERJ6GEYG155 | M. RESISTOR CH 1/10W 1. 5M | 1 | |
| R6508 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R6509, 10 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 2 | |
| R6512-14 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 3 | |
| R6515 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R6516, 17 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 2 | |
| R6518, 19 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 2 | |
| R6530 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R6531 | ERJ3GEYJ823 | M. RESISTOR CH 1/16W 82K | 1 | |
| R6533 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R6534-36 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 3 | |
| R6540, 41 | ERJ3GEYJ394 | M. RESISTOR CH 1/16W 390K | 2 | |
| R6542 | ERJ3GEYJ561 | M. RESISTOR CH 1/16W 560 | 1 | |
| R6543 | ERJ3GEYJ394 | M. RESISTOR CH 1/16W 390K | 1 | |
| R6548 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R6550, 51 | ERJ6GEYF561 | M. RESISTOR CH 1/10W 560 | 2 | |
| R6552 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R6553 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R6554-61 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 8 | |
| R6562-64 | ERJ3GEYJ823 | M. RESISTOR CH 1/16W 82K | 3 | |
| R6566 | ERJ3GEYJ823 | M. RESISTOR CH 1/16W 82K | 1 | |
| R6567-70 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 4 | |
| R6573 | ERJ6GEYJ471 | M. RESISTOR CH 1/10W 470 | 1 | |
| R6574 | ERJ6GEYG331 | M. RESISTOR CH 1/10W 330 | 1 | |
| R6575 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R6576 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| | | | | |
| RY4101 | VSY2070 | RELAY | 1 | |
| RY4201 | VSY2070 | RELAY | 1 | |
| | | | | |
| SW4701 | VSS0367-06B | SWITCH | 1 | |
| SW6501 | VSS0186 | SWITCH | 1 | |
| SW6502 | VSS0187 | SWITCH | 1 | |
| SW6503, 04 | VSS0186 | SWITCH | 2 | |
| SW6505 | VSS0187 | SWITCH | 1 | |
| SW6506 | VSS0186 | SWITCH | 1 | |
| SW6507 | EVQQS205K | SWITCH | 1 | |
| SW6508-10 | VSS0187 | SWITCH | 3 | |
| SW6511 | EVQQSB04B | SWITCH | 1 | |
| SW6512 | VSS0186 | SWITCH | 1 | |
| SW6514 | VSS0186 | SWITCH | 1 | |
| SW6516 | EVQQS205K | SWITCH | 1 | |
| SW6524-26 | EVQQSB04B | SWITCH | 3 | |
| | | | | |
| T4701 | VLT0623 | TRANSFORMER | 1 | |
| | | | | |
| TG4001 | EYF6CU | TEST POINT | 1 | |
| | | | | |
| VR4001 | EVM7JGA00B23 | V. RESISTOR 2K | 1 | |
| VR4002 | EVM7JGA00B53 | V. RESISTOR 5K | 1 | |
| VR4101 | VRV0080 | V. RESISTOR | 1 | |
| VR4102, 03 | EVM7JGA00B14 | V. RESISTOR 10K | 2 | |
| VR4201 | VRV0080 | V. RESISTOR | 1 | |
| VR4202, 03 | EVM7JGA00B14 | V. RESISTOR 10K | 2 | |
| VR4301 | EVM7JGA00B14 | V. RESISTOR 10K | 1 | |
| VR4401 | EVM7JGA00B14 | V. RESISTOR 10K | 1 | |
| VR4501 | EVM7JGA00B14 | V. RESISTOR 10K | 1 | |
| VR4503 | EVM7JGA00B54 | V. RESISTOR 50K | 1 | |
| VR4701 | EVM7JGA00B14 | V. RESISTOR 10K | 1 | |
| | | | | |
| X4601 | VSX0140 | CRYSTAL OSCILLATOR | 1 | |
| X6501 | VSX0094C | CRYSTAL OSCILLATOR | 1 | |
| X6502 | VSX0140 | CRYSTAL OSCILLATOR | 1 | |
| | | | | |
| | | MISCELLANEOUS | | |
| | | | | |
| | VGL0721 | BACK LIGHT BASE | 1 | |
| | VMX1144 | LED SPACER | 1 | |
| | | | | |
| | | | | |

## VEP01786A / VEP80980A / VEP00W03A / VEP00W04A

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| ■ | VEP01786A | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | REAR JACK | | |
| C1020 | ECST1CD476Z | T. CAPACITOR CH 16V 47U | 1 | |
| C1021 | ECUM1C105KBM | C. CAPACITOR CH 16V 1U | 1 | |
| C1022 | ECUM1H223KBN | C. CAPACITOR CH 50V 0. 022U | 1 | |
| C1023 | ECUX1H102JV | C. CAPACITOR CH 50V 1000P | 1 | |
| C1024, 25 | ECQP1682JZ | P. CAPACITOR 100V 6800P | 2 | |
| C1026 | ECEV1CV470Q | E. CAPACITOR CH 16V 47U | 1 | |
| C1029 | ECUX1H221JCV | C. CAPACITOR CH 50V 220P | 1 | |
| C1030 | ECUX1H151JCV | C. CAPACITOR CH 50V 150P | 1 | |
| C1031 | ECUX1H390JCV | C. CAPACITOR CH 50V 39P | 1 | |
| C1032 | ECUM1E473KBN | C. CAPACITOR CH 25V 0. 047U | 1 | |
| C1033 | ECEV0JN100Q | E. CAPACITOR CH6. 3V 10U | 1 | |
| C1034 | ECUM1H273KBN | C. CAPACITOR CH 50V 0. 027U | 1 | |
| C1035 | ECUX1H822KBV | C. CAPACITOR CH 50V 8200P | 1 | |
| C1036 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C1037 | ECEV0JN100Q | E. CAPACITOR CH6. 3V 10U | 1 | |
| C1038 | ECUX1H222KBV | C. CAPACITOR CH 50V 2200P | 1 | |
| C1039 | VCC0030 | C. CAPACITOR | 1 | |
| C1040 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C1050-65 | ECUX1H102JCV | C. CAPACITOR CH 50V 1000P | 16 | |
| CP1001 | VSQ0834 | CIRCUIT PROTECTOR | 1 | |
| D1001 | RK34 | DIODE | 1 | |
| D1002, 03 | MA142K | DIODE | 2 | |
| FL1001 | EIR7QF012B | TRANSFORMER | 1 | |
| IC1001 | NJM4558M-D | IC | 1 | |
| L1001 | VLQ0423J472 | COIL 4700UH | 1 | |
| L1010 | VLP0320 | COIL | 1 | |
| L1011, 12 | VLF1151A132 | COIL | 2 | |
| L1013-23 | VLF1315A102 | FILTER | 11 | |
| P1001 | VJP3810A040 | CONNECTOR (MALE) | 1 | |
| P1003 | VJP3125B009 | CONNECTOR (MALE) | 1 | |
| P1004 | VJP3125B003 | CONNECTOR (MALE) 3P | 1 | |
| P1006 | VJP2824B002 | CONNECTOR (MALE) | 1 | |
| P1007 | VJP2824A003 | CONNECTOR (MALE) 3P | 1 | |
| P1008 | VJP3172D002 | CONNECTOR (MALE) | 1 | |
| P1009 | VJP3518B002 | CONNECTOR (MALE) | 1 | |
| P1010 | VJP3518B008 | CONNECTOR (MALE) | 1 | |
| P1011 | VJP3125B003 | CONNECTOR (MALE) 3P | 1 | |
| P1012 | VJP3125B004 | CONNECTOR (MALE) | 1 | |
| P1013 | VJP3125B002 | CONNECTOR (MALE) | 1 | |
| P1014 | VJP3125B004 | CONNECTOR (MALE) | 1 | |
| P1015 | VJP3098B050 | CONNECTOR (MALE) | 1 | |
| P1016, 17 | VJS3551 | CONNECTOR (MALE) | 2 | |
| P1018 | VJP3551 | CONNECTOR (FEMALE) | 1 | |
| Q1001 | 2SJ280S | TRANSISTOR | 1 | |
| Q1002 | 2SB779-R | TRANSISTOR | 1 | |
| Q1003 | 2SD874-R | TRANSISTOR | 1 | |
| Q1005 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q1006-08 | 2SD1979 | TRANSISTOR | 3 | |
| Q1009 | 2SB1220-R | TRANSISTOR | 1 | |
| Q1010, 11 | 2SD1821-R | TRANSISTOR | 2 | |
| QR1001-06 | UN5113 | TRANSISTOR-RESISTOR | 6 | |
| R1001 | ERJ6GEYG104 | M. RESISTOR CH 1/10W 100K | 1 | |
| R1002 | ERJ6GEYG151 | M. RESISTOR CH 1/10W 150 | 1 | |
| R1003 | VLF1315A102 | FILTER | 1 | |
| R1006, 07 | VLF1315A102 | FILTER | 2 | |
| R1010 | VLF1315A102 | FILTER | 1 | |
| R1012, 13 | VLF1315A102 | FILTER | 2 | |
| R1015 | ERDS2TJ4R7 | C. RESISTOR 1/4W 4. 7 | 1 | |
| R1016 | ERJ6GEYJ1R0 | M. RESISTOR CH 1/10W 1 | 1 | |
| R1020 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R1021 | ERJ3GEYJ392 | M. RESISTOR CH 1/16W 3. 9K | 1 | |
| R1022 | ERJ3GEYJ561 | M. RESISTOR CH 1/16W 560 | 1 | |
| R1023 | ERJ8GCYJ1R0 | M. RESISTOR CH 1/8W 1. 0 | 1 | |
| R1024 | ERJ3GEYJ183 | M. RESISTOR CH 1/16W 18K | 1 | |
| R1025 | ERJ3GEYJ390 | M. RESISTOR CH 1/16W 39 | 1 | |
| R1028 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R1029 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R1030 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R1032, 33 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 2 | |
| R1034 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R1035 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R1036 | ERJ3GEYJ124 | M. RESISTOR CH 1/16W 120K | 1 | |
| R1037 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R1038 | ERJ3GEYJ821 | M. RESISTOR CH 1/16W 820 | 1 | |
| R1039 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R1040 | ERJ3GEYJ221 | M. RESISTOR CH 1/16W 220 | 1 | |
| R1041 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R1042 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R1043 | ERJ3GEYG822 | M. RESISTOR CH1/16W 8. 2K | 1 | |
| R1044 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R1045 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R1046, 47 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 2 | |
| R1048 | ERJ3GEYJ561 | M. RESISTOR CH 1/16W 560 | 1 | |
| R1049 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R1052-55 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 4 | |
| T1001 | VLT0729 | TRANSFORMER | 1 | |
| TG1001 | EYF6CU | TEST POINT | 1 | |
| VR1001 | VRV0161B503 | V. RESISTOR 50K | 1 | |
| VR1002 | VRV0161B103 | V. RESISTOR 10K | 1 | |
| | | MISCELLANEOUS | | |
| | VMP4846 | JACK ANGLE | 1 | |
| | XYN3+K6 | SCREW | 1 | |
| ■ | VEP80980A | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | VTR FLEX | | |
| ■ | VEP00W03A | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | POWER SW | | |
| P9601 | VJP1595T | CONNECTOR (MALE) 2P | 1 | |
| SW9601 | VST0076 | SWITCH | 1 | |
| ■ | VEP00W04A | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | TOGGLE SW | | |
| D9301-07 | MA165 | DIODE | 7 | |
| P9301 | VJP1611T | CONNECTOR (MALE) | 1 | |
| SW9301-03 | VST0300 | SWITCH | 3 | |
| SW9304 | VST0299 | SWITCH | 1 | |
| | | MISCELLANEOUS | | |
| | VMP4838 | SW HOLDER ANGLE | 1 | |

VEP00W04A / VEP00W05A / VEP00W07A / VEP80961B / VEP00W08B / VEP00X87B / VEP20537A / VEP20538A / VEP8614

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| ■ | VEP00W05A | P.C.BOARD W/COMPONENT | 1 | (RTL) |
| | | MODE CHECK | | |
| P9501 | VJP1595T | CONNECTOR (MALE) 2P | 1 | |
| SW9501 | EVQQS205K | SWITCH | 1 | |
| ■ | VEP00W07A | P.C.BOARD W/COMPONENT | 1 | (RTL) |
| | | ALARM/MONITOR | | |
| D9101 | MA165 | DIODE | 1 | |
| P9101 | VJP1613T | CONNECTOR (MALE) | 1 | |
| R9101 | ERDS2T0 | C.RESISTOR 1/4W 0 | 1 | |
| SW9101 | EVQQS205K | SWITCH | 1 | |
| VR9101.02 | VRV0099 | V.RESISTOR | 2 | |
| | | MISCELLANEOUS | | |
| | BBH1 | BATTERY HOLDER | 1 | |
| ■ | VEP80961B | P.C.BOARD W/COMPONENT | 1 | (RTL) |
| | | BACKUP BATT | | |
| B1 | R2032/BBH1 | BATTERY HOLDER | 1 | |
| ■ | VEP00W08B | P.C.BOARD W/COMPONENT | 1 | (RTL) |
| | | HEADPHONE | | |
| C9201.02 | ECKF1H102ZF | C.CAPACITOR 50V 1000P | 2 | |
| J9201 | VJJ0522 | JACK | 1 | |
| L1.L2 | VLP0147 | COIL | 2 | |
| P9201 | VJP1608T | CONNECTOR (MALE) | 1 | |
| | | MISCELLANEOUS | | |
| | VJP2717 | CONNECTOR (MALE) | 1 | |
| ■ | VEP00X87B | P.C.BOARD W/COMPONENT | 1 | (RTL) |
| | | DC INPUT | | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| D1 | S3V40 | DIODE | 1 | |
| | | MISCELLANEOUS | | |
| | VJF1158 | BIND | 2 | |
| | VLP0312 | FERRITE CORE | 1 | |
| ■ | VEP20537A | P.C.BOARD W/COMPONENT | 1 | (RTL) |
| | | FRONT TOGGLE | | |
| P1 | VJS2949B015 | CONNECTOR (FEMALE) | 1 | |
| P2 | VJP1598T | CONNECTOR (MALE) 5P | 1 | |
| P3 | VJP1608T | CONNECTOR (MALE) | 1 | |
| P4 | VJP1597T | CONNECTOR (MALE) 4P | 1 | |
| R1 | ERDS2T0 | C.RESISTOR 1/4W 0 | 1 | |
| R2 | ERDS2TJ562 | C.RESISTOR 1/4W 5.6K | 1 | |
| R3 | ERDS2TJ183 | C.RESISTOR 1/4W 18K | 1 | |
| R4 | ERDS2TJ333 | C.RESISTOR 1/4W 33K | 1 | |
| SW1 | VST0194 | SWITCH | 1 | |
| SW2 | VST0195 | SWITCH | 1 | |
| ■ | VEP20538A | P.C.BOARD W/COMPONENT | 1 | (RTL) |
| | | FRONT | | |
| P1 | VJP1608T | CONNECTOR (MALE) | 1 | |
| SW1 | EVQQSB05G | SWITCH | 1 | |
| SW2 | VRV0270 | V.RESISTOR | 1 | |
| ■ | VEP86149A | P.C.BOARD W/COMPONENT | 1 | (RTL) |
| | | OPERATE | | |
| D6001-03 | BR1102W | DIODE | 3 | |
| P501 | VJP3125B010 | CONNECTOR (MALE) | 1 | |
| SW6001-05 | EVQPHB03T | SWITCH | 5 | |
| | | MISCELLANEOUS | | |
| | VMX2126 | LED SPACER | 1 | |
| ■ | VEP80858A | P.C.BOARD W/COMPONENT | 1 | (RTL) |
| | | BACK TALLY | | |
| D1 | TLRA116 | DIODE | 1 | |
| SW1 | VST0131 | SWITCH | 1 | |

## VEP80858A / VEP80A14A / VEP80A13A / VEP86252A / VEP29019A / VEP29022A

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| ■ | VEP80A14A | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | FRONT MIC | | |
| L5-L7 | VLP0147 | COIL | 3 | |
| P1 | VJS3417 | CONNECTOR (FEMALE) | 1 | |
| P2 | VJP2261 | CONNECTOR (MALE) | 1 | |
| ■ | VEP80A13A | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | BNC | | |
| L1-L4 | VLP0147 | COIL | 4 | |
| P3 | VJP1608T | CONNECTOR (MALE) | 1 | |
| ■ | VEP86252A | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | MEMORY CARD | | |
| | VJP3839 | PC CARD CONNECTOR | 1 | |
| | VMP4840 | HOLDER ANGLE | 1 | |
| | XY6N2+F6 | SCREW | 2 | |
| | VMZ2586 | CARD BRAKE BARRIER | 1 | |
| ■ | VEP29019A | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | H DEF | | |
| C9101, 02 | ECA1CFQ331 | E. CAPACITOR 16V 330U | 2 | |
| C9104 | ECA1HFQ820 | E. CAPACITOR 50V 82U | 1 | |
| C9105 | VCF0066J103 | P. CAPACITOR 160V 0. 01U | 1 | |
| C9106 | VCF0066J332 | P. CAPACITOR 3300P | 1 | |
| C9107, 08 | VCF0066J223 | P. CAPACITOR 0. 022U | 2 | |
| C9110-12 | ECKD3A472MEH | C. CAPACITOR 1KV 4700P | 3 | |
| C9113 | ECA1CFQ121 | E. CAPACITOR 16V 120U | 1 | |
| C9114 | VCF0066J182 | P. CAPACITOR 1800P | 1 | |
| D9101 | MA142K | DIODE | 1 | |
| D9102 | EC11FS2 | DIODE | 1 | |
| D9103 | MA142K | DIODE | 1 | |
| D9104 | SHV-03 | DIODE | 1 | |
| D9105 | MA142K | DIODE | 1 | |
| D9106 | EC11FS2 | DIODE | 1 | |
| L9101 | VLQ0417 | COIL 10UH | 1 | |
| L9102 | ELH5L220 | COIL 22UH | 1 | |
| L9103 | VLQEL06F270J | COIL | 1 | |
| L9104 | VLQ0620 | COIL | 1 | |
| P9006 | VJP2311 | CONNECTOR (MALE) | 1 | |
| P9007 | VJP1595T | CONNECTOR (MALE) 2P | 1 | |
| P9008 | VJP1232T | CONNECTOR (MALE) 5P | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| P9009 | VJP2271 | CONNECTOR (MALE) | 1 | |
| Q9101, 02 | 2SK1954Z | TRANSISTOR | 2 | |
| R9101 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R9102 | ERJ3GEYJ105 | M. RESISTOR CH 1/16W 1M | 1 | |
| R9103 | ERDS2TJ222 | C. RESISTOR 1/4W 2. 2K | 1 | |
| R9104 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R9105 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R9107 | VRE0034E300 | M. RESISTOR CH 1/10W 30 | 1 | |
| R9108 | ERJ6GEYG105 | M. RESISTOR CH 1/10W 1M | 1 | |
| R9109 | ERJ6GEY0R00 | M. RESISTOR CH 1/10W 0 | 1 | |
| R9110, 11 | ERJ6GEYG105 | M. RESISTOR CH 1/10W 1M | 2 | |
| R9112 | ERJ6GEY0R00 | M. RESISTOR CH 1/10W 0 | 1 | |
| R9113, 14 | ERJ6GEYJ155 | M. RESISTOR CH 1/10W 1. 5M | 2 | |
| R9115 | ERJ6GEYJ224 | M. RESISTOR CH 1/10W 220K | 1 | |
| R9118 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R9119 | ERJ3GEYJ105 | M. RESISTOR CH 1/16W 1M | 1 | |
| R9120 | ERJ6GEY0R00 | M. RESISTOR CH 1/10W 0 | 1 | |
| T9101 | ETF15L7A | TRANSFORMER | 1 | |
| TG9101 | EYF6CU | TEST POINT | 1 | |
| VR9101 | VRV0113B500 | V. RESISTOR 50 | 1 | |
| VR9102 | EVMLRGA00B16 | V. RESISTOR 10M | 1 | |
| VR9103 | VRV0113B105 | V. RESISTOR 1000K | 1 | |
| ■ | VEP29022A | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | EVF VIDEO | | |
| C9001 | ECA1CFQ331 | E. CAPACITOR 16V 330U | 1 | |
| C9002 | ECA0JKF121 | E. CAPACITOR 6. 3V 120U | 1 | |
| C9003-06 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 4 | |
| C9007 | ECA1CKF560 | E. CAPACITOR 16V 56U | 1 | |
| C9008 | ECST1CY105Z | T. CAPACITOR CH 16V 1U | 1 | |
| C9009 | ECUX1E223KBV | C. CAPACITOR CH 25V 0. 023U | 1 | |
| C9010 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 1 | |
| C9011 | ECST1CY105Z | T. CAPACITOR CH 16V 1U | 1 | |
| C9012 | ECST1CC226Z | T. CAPACITOR CH 16V 22U | 1 | |
| C9013 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C9014 | ECUX1H682KBV | C. CAPACITOR CH 50V 6800P | 1 | |
| C9015 | ECHU1C472JB | P. CAPACITOR 16V 4700P | 1 | |
| C9016 | ECUX1H331JCV | C. CAPACITOR CH 50V 330P | 1 | |
| C9017 | ECUM1C473KBV | C. CAPACITOR CH 16V 0. 047U | 1 | |
| C9018 | ECUM1C105ZFN | C. CAPACITOR CH 16V 1U | 1 | |
| C9019 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C9020 | ECST1CY105Z | T. CAPACITOR CH 16V 1U | 1 | |
| C9021 | ECST1CY335Z | T. CAPACITOR CH 16V 3. 3U | 1 | |
| C9022 | ECUX1H472KBV | C. CAPACITOR CH 50V 4700P | 1 | |
| C9023 | ECUX1H181JCV | C. CAPACITOR CH 50V 180P | 1 | |
| C9024 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C9025, 26 | ECA0JKF121 | E. CAPACITOR 6. 3V 120U | 2 | |
| C9027 | ECST1CX106Z | T. CAPACITOR CH 16V 10U | 1 | |
| C9028 | ECUX1H272KBV | C. CAPACITOR CH 50V 2700P | 1 | |
| C9029 | ECA1CKF560 | E. CAPACITOR 16V 56U | 1 | |
| C9030 | ECUX1H221JCV | C. CAPACITOR CH 50V 220P | 1 | |
| C9031 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C9032 | ECUM1C105ZFN | C. CAPACITOR CH 16V 1U | 1 | |
| C9033 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C9034 | ECST1AC226Z | T. CAPACITOR CH 10V 22U | 1 | |
| C9035 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C9036 | ECA1CKF560 | E. CAPACITOR 16V 56U | 1 | |
| C9037 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C9039 | ECUX1H330JCV | C. CAPACITOR CH 50V 33P | 1 | |
| C9041 | ECUX1H221JCV | C. CAPACITOR CH 50V 220P | 1 | |
| C9042 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C9044 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C9045 | ECUX1H0R5CCV | C. CAPACITOR 50V 0. 5P | 1 | |

## VEP29022A / VEP29020A

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| C9046 | ECA1HFQ820 | E. CAPACITOR 50V 82U | 1 | |
| C9047 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| C9048 | ECA1CKF560 | E. CAPACITOR 16V 56U | 1 | |
| C9049 | ECUM1C105ZFN | C. CAPACITOR CH 16V 1U | 1 | |
| C9051 | ECUX1H150JCV | C. CAPACITOR CH 50V 15P | 1 | |
| C9055 | ECA1EKF390 | E. CAPACITOR 25V 39U | 1 | |
| C9056 | ECA1CKF560 | E. CAPACITOR 16V 56U | 1 | |
| C9057 | ECUX1H103KBV | C. CAPACITOR CH 50V 0. 01U | 1 | |
| C9058 | ECUX1E104ZFV | C. CAPACITOR CH 25V 0. 1U | 1 | |
| | | | | |
| D9001 | MA142K | DIODE | 1 | |
| D9002 | RD10UMB1 | DIODE | 1 | |
| D9003 | MA143 | DIODE | 1 | |
| D9005, 06 | MA143 | DIODE | 2 | |
| D9007, 08 | MA3047 | DIODE | 2 | |
| | | | | |
| DL9001 | VLD0259 | DELAY | 1 | |
| | | | | |
| IC9001 | AN77L05M | IC | 1 | |
| IC9002 | HA11423MP | IC | 1 | |
| IC9003 | TC7S04F | IC | 1 | |
| IC9004 | TC7S32F | IC | 1 | |
| IC9005 | MC74HC164F | IC | 1 | |
| IC9006 | M66311FP | IC | 1 | |
| IC9007 | MC74HC08AF | IC | 1 | |
| IC9008 | TC7W04F | IC | 1 | |
| IC9009 | AN8008M | IC | 1 | |
| | | | | |
| P9001 | VJP2741A016 | CONNECTOR (MALE) 16P | 1 | |
| P9002 | VJP2312 | CONNECTOR (MALE) | 1 | |
| P9003 | VJP2311 | CONNECTOR (MALE) | 1 | |
| P9004 | VJP2279 | CONNECTOR (MALE) | 1 | |
| P9005 | VJP1595T | CONNECTOR (MALE) 2P | 1 | |
| | | | | |
| Q9001-03 | 2SD1819A-R | TRANSISTOR | 3 | |
| Q9004 | 2SC3624 | TRANSISTOR | 1 | |
| Q9005 | 2SA1411 | TRANSISTOR | 1 | |
| Q9006-08 | 2SD1819A-R | TRANSISTOR | 3 | |
| Q9009 | 2SC3624 | TRANSISTOR | 1 | |
| Q9010 | 2SA1411 | TRANSISTOR | 1 | |
| Q9011 | 2SD1819A-R | TRANSISTOR | 1 | |
| Q9012 | 2SB1218A-R | TRANSISTOR | 1 | |
| Q9013 | 2SK508-B | TRANSISTOR | 1 | |
| Q9014 | 2SB1218A-R | TRANSISTOR | 1 | |
| Q9015 | 2SD1821-R | TRANSISTOR | 1 | |
| Q9016 | 2SC4181 | TRANSISTOR | 1 | |
| Q9017 | 2SD1821-R | TRANSISTOR | 1 | |
| Q9018 | 2SB1220-R | TRANSISTOR | 1 | |
| Q9019 | UN511L | TRANSISTOR-RESISTOR | 1 | |
| Q9020 | UN5214 | TRANSISTOR-RESISTOR | 1 | |
| Q9021 | 2SD1819A-R | TRANSISTOR | 1 | |
| | | | | |
| R9001 | ERJ12YJR68 | M. RESISTOR CH 1/2W 0. 68 | 1 | |
| R9002 | ERJ3GEYJ474 | M. RESISTOR CH 1/16W 470K | 1 | |
| R9003 | ERJ3GEYG822 | M. RESISTOR CH1/16W 8. 2K | 1 | |
| R9004 | ERJ3GEYJ333 | M. RESISTOR CH 1/16W 33K | 1 | |
| R9005 | ERJ3GEYJ153 | M. RESISTOR CH 1/16W 15K | 1 | |
| R9006 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R9007 | ERJ3GEYJ100 | M. RESISTOR CH 1/16W 10 | 1 | |
| R9008 | ERJ3GEYJ121 | M. RESISTOR CH 1/16W 120 | 1 | |
| R9009 | ERJ3GEYJ183 | M. RESISTOR CH 1/16W 18K | 1 | |
| R9010 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R9011 | VRE0034E123 | M. RESISTOR CH 1/10W 12K | 1 | |
| R9012 | ERJ3GEYJ683 | M. RESISTOR CH 1/16W 68K | 1 | |
| R9013 | ERJ3GEYG822 | M. RESISTOR CH1/16W 8. 2K | 1 | |
| R9014 | ERJ3GEYG152 | M. RESISTOR CH 1/16W 1. 5K | 1 | |
| R9015 | ERJ3GEYJ222 | M. RESISTOR CH 1/16W 2. 2K | 1 | |
| R9016 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R9017 | VRE0034E103 | M. RESISTOR CH1/10W 10K | 1 | |
| R9018 | ERJ3GEYJ562 | M. RESISTOR CH 1/16W 5. 6K | 1 | |
| R9019 | ERJ3GEYG682 | M. RESISTOR CH1/16W 6. 8K | 1 | |
| R9020 | ERJ3GEYJ562 | M. RESISTOR CH 1/16W 5. 6K | 1 | |
| R9021 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R9022 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R9023 | ERJ3GEYJ4R7 | M. RESISTOR CH 1/16W 4. 7 | 1 | |
| | | | | |
| | | | | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R9024 | ERJ3GEYJ561 | M. RESISTOR CH 1/16W 560 | 1 | |
| R9025 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 1 | |
| R9026 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R9027 | ERJ3GEYJ333 | M. RESISTOR CH 1/16W 33K | 1 | |
| R9028 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R9029 | ERJ3GEYJ393 | M. RESISTOR CH 1/16W 39K | 1 | |
| R9030 | VRE0034E472 | M. RESISTOR CH 1/10W 4. 7K | 1 | |
| R9031 | ERJ3GEYJ221 | M. RESISTOR CH 1/16W 220 | 1 | |
| R9032 | ERJ3GEYG102 | M. RESISTOR CH 1/16W 1K | 1 | |
| R9033 | ERJ3GEYJ150 | M. RESISTOR CH 1/16W 15 | 1 | |
| R9034 | ERJ3GEYJ224 | M. RESISTOR CH 1/16W 220K | 1 | |
| R9035 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R9036 | ERJ3GEYJ181 | M. RESISTOR CH 1/16W 180 | 1 | |
| R9037, 38 | ERJ3GEYJ473 | M. RESISTOR CH 1/16W 47K | 2 | |
| R9039 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R9040 | ERJ3GEYG472 | M. RESISTOR CH 1/16W 4. 7K | 1 | |
| R9041 | ERJ3GEYJ333 | M. RESISTOR CH 1/16W 33K | 1 | |
| R9042 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R9043 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R9044 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R9045 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R9046 | ERJ3GEYG332 | M. RESISTOR CH 1/16W 3. 3K | 1 | |
| R9047 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R9048 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| R9049 | VRE0034E223 | M. RESISTOR CH 1/10W 22K | 1 | |
| R9050 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R9051 | ERJ3GEYG224 | M. RESISTOR CH 1/16W 220K | 1 | |
| R9052 | VRE0034E913 | M. RESISTOR CH 1/10W 91K | 1 | |
| R9053 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R9055, 56 | VRE0034E102 | M. RESISTOR CH1/10W 1K | 2 | |
| R9058 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R9059 | VRE0034E102 | M. RESISTOR CH1/10W 1K | 1 | |
| R9060 | VRE0034E222 | M. RESISTOR CH 1/10W 2. 2K | 1 | |
| R9061 | ERJ3GEYJ391 | M. RESISTOR CH 1/16W 390 | 1 | |
| R9063 | VRE0034E682 | M. RESISTOR CH 1/10W 6. 8K | 1 | |
| R9064, 65 | VRE0034E222 | M. RESISTOR CH 1/10W 2. 2K | 2 | |
| R9066 | ERJ3GEYJ101 | M. RESISTOR CH 1/16W 100 | 1 | |
| R9067, 68 | VRE0034E562 | M. RESISTOR CH 1/10W 5. 6K | 2 | |
| R9069 | VRE0034E473 | M. RESISTOR CH 1/10W 47K | 1 | |
| R9070 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R9071 | VRE0034E473 | M. RESISTOR CH 1/10W 47K | 1 | |
| R9072, 73 | ERJ3GEYJ680 | M. RESISTOR CH 1/16W 68 | 2 | |
| R9076 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |
| R9077 | ERJ3GEYJ1R0 | M. RESISTOR CH 1/16W 1 | 1 | |
| R9078 | ERJ3GEYJ470 | M. RESISTOR CH 1/16W 47 | 1 | |
| R9079, 80 | ERJ3GEYJ272 | M. RESISTOR CH 1/16W 2. 7K | 2 | |
| R9081 | ERJ3GEYJ331 | M. RESISTOR CH 1/16W 330 | 1 | |
| R9082, 83 | ERJ3GEYJ681 | M. RESISTOR CH 1/16W 680 | 2 | |
| R9085 | ERJ3GEYJ681 | M. RESISTOR CH 1/16W 680 | 1 | |
| R9087 | ERJ3GEYJ681 | M. RESISTOR CH 1/16W 680 | 1 | |
| R9089 | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 1 | |
| R9090 | ERJ3GEYJ331 | M. RESISTOR CH 1/16W 330 | 1 | |
| R9092 | ERJ3GEYJ512 | M. RESISTOR CH 1/16W 5. 1K | 1 | |
| R9093 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| R9095 | ERJ3GEYJ104 | M. RESISTOR CH 1/16W 100K | 1 | |
| | | | | |
| TG9001 | EYF6CU | TEST POINT | 1 | |
| | | | | |
| VR9001, 02 | EVM7JGA00B53 | V. RESISTOR 5K | 2 | |
| VR9003 | EVM7JGA00B22 | V. RESISTOR 200 | 1 | |
| VR9004 | EVM7JGA00B52 | V. RESISTOR 500 | 1 | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| ■ | VEP29020A | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | EVF SWVR | | |
| | | | | |
| | | | | |
| | | | | |
| P9010 | VJP2312 | CONNECTOR (MALE) | 1 | |
| | | | | |
| SW9301 | VST0114 | SWITCH | 1 | |
| SW9302 | VST0113 | SWITCH | 1 | |
| | | | | |
| | | | | |

## VEP29020A / VEP29021A / VEP29023A

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| VR9301 | VRV0278B504 | V. RESISTOR 500K | 1 | |
| VR9302 | VRV0278B102 | V. RESISTOR 1K | 1 | |
| VR9303 | VRV0278B104 | V. RESISTOR 100K | 1 | |
| | | | | |
| | | MISCELLANEOUS | | |
| | | | | |
| | VMX2539 | VR SPACER | 1 | |
| | | | | |
| ■ | VEP29021A | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | F TALLY | | |
| | | | | |
| D9501-03 | KR5009X-1CDE | DIODE | 3 | |
| | | | | |
| | | MISCELLANEOUS | | |
| | | | | |
| | VMP4945 | HOLDER PLATE | 1 | |
| | XYN2+F6 | SCREW | 1 | |
| | | | | |
| ■ | VEP29023A | P. C. BOARD W/COMPONENT | 1 | (RTL) |
| | | EVF CRTMASK | | |
| | | | | |
| D9402 | BR1101W330TR | DIODE | 1 | |
| D9404 | AA1101W330TR | DIODE | 1 | |
| D9405 | BR1101W330TR | DIODE | 1 | |
| D9406 | AA1101W330TR | DIODE | 1 | |
| | | | | |
| R9401 | ERJ3GEY0R00 | M. RESISTOR CH 1/16W 0 | 1 | |
| | | | | |
| | | MISCELLANEOUS | | |
| | | | | |
| | VMP4928 | CRT EARTH PLATE | 1 | |

| Ref. No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |

## Servicing Fixtures &Tools

| Fig | ITEM | PART No. | JIG & EQUIPMENT | AJ-D700 | AJ-D750 | Remark |
|---|---|---|---|---|---|---|
| 1 | Jig Tool | VFK1145 | Back Tension Meter(T2-M30-P) | yes | yes | |
| 2 | | VFK1149 | Post Driver | yes | yes | |
| 3 | | VFK71 | Dial Torque Gauge(150g) | yes | yes | |
| 4 | | VFK1191 | Dial Torque Gauge(45g) | yes | yes | |
| 5 | | VFK1152 | Dial Torque Gauge Adaptor | yes | yes | |
| 6 | | VFK0357 | Eccentric Screwdriver(1.5) | yes | yes | |
| 7 | | VFK1154 | Post Height Fixture | yes | yes | |
| 8 | | VFK1153 | Mech. Neutral Plate(Post) | yes | yes | |
| 9 | | VFK1157 | Mech. Neutral Plate(Cassette) | yes | yes | |
| 10 | | VFK1155 | Neutral Position Tool(Gold) | yes | yes | |
| 11 | | VFK1156 | Neutral Position Tool(Black) | yes | yes | |
| 12 | | VFK1208 | Neutral Position Tool(Black With Hole) | yes | yes | |
| 13 | | VFK1150 | Nut Driver(5.5mm) | yes | yes | |
| 14 | | VFK1151 | Nut Driver(2.5mm) | yes | yes | |
| 15 | | VFK1188 | Dial Tension Gauge(30g) | yes | yes | |
| 16 | | VFK0948 | Check Light | yes | yes | |
| 17 | | VFK0749 | Froiral Grease (for plastic) | yes | yes | |
| 18 | | MOR265 | Morlytone Grease (for metal) | yes | yes | |
| 19 | | VFK1146 | Philips Driver(Fine)(00-75) | yes | yes | |
| 20 | | VFK1147 | Philips Driver(Fine)(0-100) | yes | yes | |
| 21 | | VFK1148 | Hex.Driver(1.5) | yes | yes | |
| 22 | | VFK1178 | Hex.Driver(0.89) | yes | yes | |
| 23 | | VFK1179 | Hex.Driver(0.71) | yes | yes | |
| 24 | | VFK1190 | HEX. Wrench | yes | yes | |
| 25 | | VFK1209 | Torque Driver(0.4-3Kg) | yes | yes | |
| 26 | | VFK0912 | Post Axis Driver(1.5mm) | yes | yes | |
| 27 | | DAQ-12 | A/D Board | yes | yes | Purchase locally |
| 28 | | VFM3580KM | Alignment Tape(No.1) | yes | yes | for NTSC |
| 29 | | VFM3581KM | Alignment Tape(No.2) | yes | yes | for NTSC |
| 30 | | VFM3582KM | Alignment Tape(No.3) | yes | yes | for NTSC |
| 31 | | AJ-CL12MP | Cleaning Tape | yes | yes | SALES |
| 32 | | VFK1159 | LISTA Software | yes | yes | |
| 33 | | VFK1186 | LISTA CABLE | yes | yes | |
| 34 | | VFK1194 | EXTENSION BOARD | yes | no | |
| 35 | | VFK1192 | F EXTENSION BOARD | no | yes | |
| 36 | | VFK1193 | H EXTENSION BOARD | no | yes | |
| 37 | | VFK1162 | EVR Tool Software | yes | no | |
| 38 | | VFK1158 | B.E.R. Counter Tool | yes | no | |
| 39 | | VFK1185 | B.E.R. Counter Cable | yes | no | |
| 40 | | VFKW1000AA | EVR I/F Box Unit | yes | no | |
| 41 | | VFKW1000C | EVR RS232C Cable | yes | no | |
| 42 | | VFK1180 | EVR SUB I/F Unit | yes | no | |
| 43 | | VFK1187 | EVR Cable | yes | no | |
| 44 | | VFK1210 | Multi-Canon Cable | yes | no | |
| 45 | | VFK0369 | Tweezers | yes | yes | |
| 46 | | VFK0371 | Radio Prier | yes | yes | |
| 47 | | VFK0372 | Cutter Prier | yes | yes | |
| 48 | | VFK0338 | Trimmer Adjustment Driver | yes | yes | |
| 49 | | VFK0337 | Philips Driver | yes | yes | |
| 50 | | VFM3000EDS | Alignment Tape(DV LISTA) | no | yes | |
| 51 | | VFM3010EDS | Alignment Tape(DV Color Bar) | no | yes | for NTSC |
| 52 | | VFM3680KM | Alignment Tape(No.1) | yes | yes | for PAL |
| 53 | | VFM3681KM | Alignment Tape(No.2) | yes | yes | for PAL |
| 54 | | VFM3682KM | Alignment Tape(No.3) | yes | yes | for PAL |
| 55 | | VFM3110EDS | Alignment Tape(DV Color Bar) | no | yes | for PAL |

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Order No. VSD9610SB614-1

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Software Version Up Grade

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 14A | VSD9606M501A/B | F6TKA0001 |

Board : VTR System Control (VEP06A22B)

The following software has been up-dated to add the functioning of the VTR.

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| IC6006 | VSI2334 | VSI2334A | VTR SYSTEM PROM Ver. 1.1 | 1 | |

< TEST MENU >

| | | | |
|---|---|---|---|
| CAM SYSCON | IC3502 : 1.1 | * VTR SYSCON | IC6006 : 1.1 |
| CAM SYSCON | IC3505 : 1.1 | SERVO | IC100 |

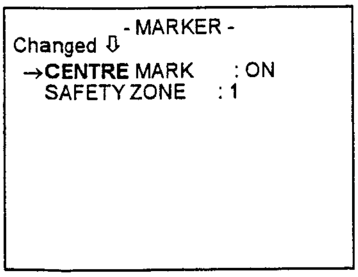
*** Notes ***
**This is the revision of the Technical Bulletin No. VSD9610SB614. Please substitute new Technical Bulletin No. VSD9610SB614-1 for the old one. (VSD9610SB614)**

**< Improvement of Performance >**

1. Picture may be frozen during REW mode. To prevent it, EVR shift value by PLL VCO mode is changed as follows.

   REW mode + (7, F) → + (2, 0)

2. Audio pop noise may appear on the Speaker/Ear-phone when the mode is changed from STOP to FF/REW mode. It is improved.
3. Character "CENTER" in the MARKER Menu is changed to "CENTRE" as shown below.



- MARKER -
Changed ⇩
→**CENTRE** MARK : ON
SAFETY ZONE : 1

| Item | Variable Range | VF Display | Remarks |
|---|---|---|---|
| **CENTRE** MARK | ON<br>OFF | USER<br>ENG | Centre mark display ON/OFF |

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*** When PROM is replaced, PROM Socket Cover must be replaced to new one at the same time as follows.**

Installation Method of PROM Socket Cover

1. After replacement of PROM, install the PROM Socket Cover on the PROM Socket fitting A portion of PROM Socket Cover with B portion of PROM as shown in figures 1 and 2.
2. Confirm that concave portion of the PROM and (Δ) portion on the PROM Socket Cover is same direction.

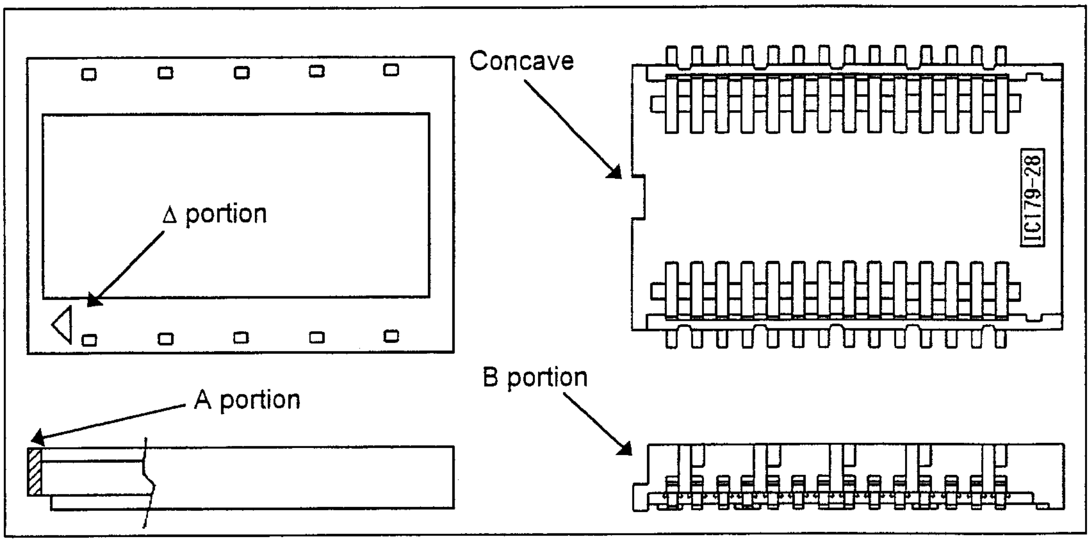
Concave
Δ portion
IC179-28
A portion
B portion

Fig. 1

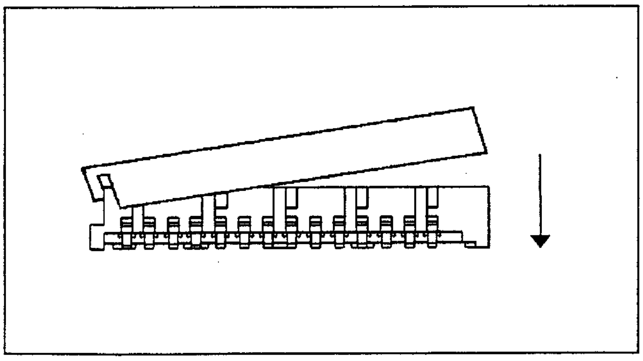

Fig. 2

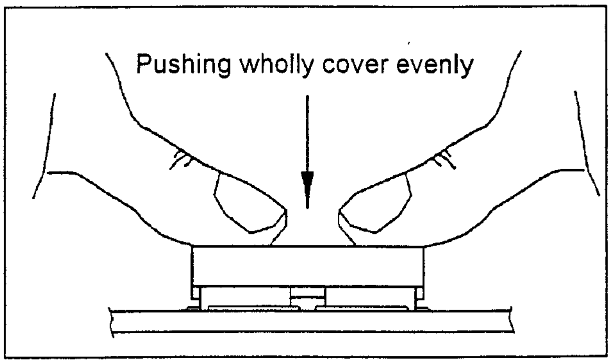
Pushing wholly cover evenly

Fig. 3

3. Press the PROM Socket Cover pushing the wholly cover evenly as shown in figure 3.
4. After installation, check that the PROM Socket does not get out of the PROM Socket Cover more than 0.2mm as shown in figure 4.

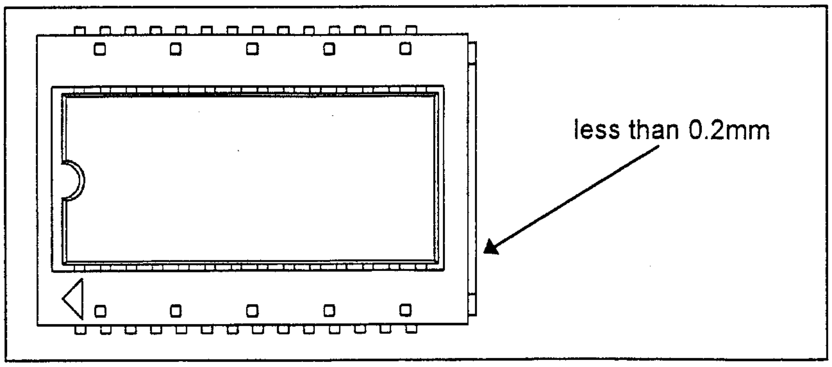
less than 0.2mm

Fig. 4

9610$B614-1

*** When PROM is replaced, MENU setting is returned to factory setting. If the MENU setting is returned to user setting, MENU data is saved to IC CARD or EVR NV-RAM before replacement of PROM.**

Replacement Method of PROM

1. Connect the EVR tool to AJ-D700 and set the ECU CONNECT on the SERVICE ADJ MENU to EVR, then insert the EVR connector to ECU connector (6P) on the Side Panel. After setting, turn the MENU OFF.
2. Execute the CAM_TOOL.EXE to start the EVR program.
3. Follow the displayed instructions until MAIN MENU is shown. (If the bar graph stops before 100% and MAIN MENU is not opened, turn the Power of I/F Box (VFKW1000AA) OFF and ON. Then execute the EVR program again.)
4. Select < 1. BACK UP (DOWN LOAD) RAM DATA > and execute it to back up the current user data.
5. Turn the power OFF and replace the PROM to new version.
6. **Turn the Power ON and set the CAM/BAR SW to BAR mode.**
7. Select < 6. E.V.R. DIRECT FUNCTIONS >.
8. **Execute <1.CAMERA RESET No.1> (Press [F1] + [A]) to reset previous PROM parameter. Confirm that the color bar picture switched to the normal picture. If it is not, execute <1.CAMERA RESET No.1> (Press [F1] + [A]) again.**
9. **After executing CAMERA RESET, turn the power of AJ-D700 to OFF and then ON.**
10. **Select < 2. RESTORE (UP LOAD) RAM DATA >) and execute it to upload the user data.**
11. **After upload the user data, turn the power of AJ-D700 to OFF and then ON again.**

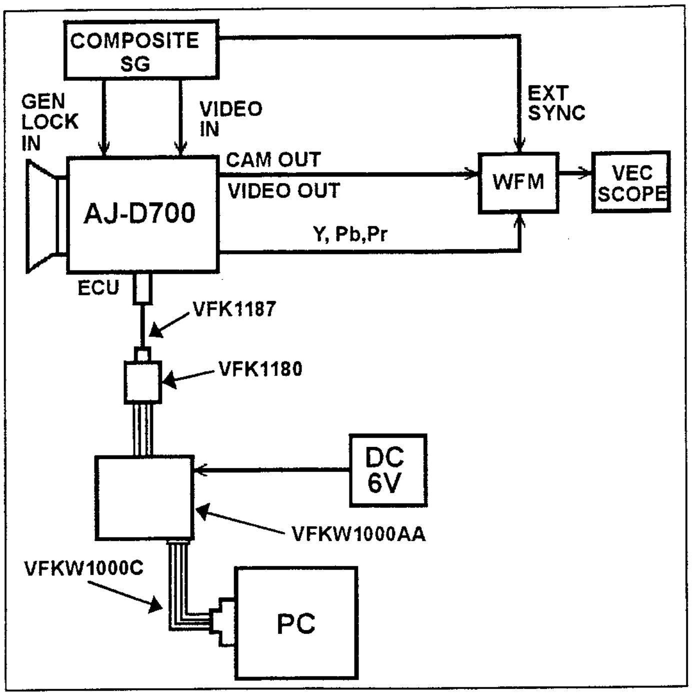

Fig. 5

MAIN MENU

1. BACK UP (DOWNLOAD) RAM DATA.
2. RESTORE (UPLOAD) RAM DATA.
3. PREPARATION OF ADJUSTMENT.
4. START ADJUSTMENT.
5. ELECTRICAL ADJUSTMENT.
6. E.V.R. DIRECT FUNCTIONS.
7. BACK UP (DOWNLOAD) RAM DATA.<OPTION>
8. RESTORE (UPLOAD) RAM DATA. <OPTION>

1. COMMAND INPUT FUNCTION

[ E.V.R. FUNCTION ]

COMMAND : [00]
DATA : 00
ADDRESS : 00

[ MACRO FUNCTION ]

| | | |
|---|---|---|
| 1. | CAMERA RESET No.1 | [F1]. [A] |
| 2. | CAMERA RESET No.2 | [F1]. [B] |
| 3. | VF OUT | [F1]. [C] |
| 4. | MONITOR OUT LEVEL | [F2]. [0] |

≪ Page Up : INC Page Down DEC ≫

VA77-28

Order No. VSD9611SB617

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Improvement of Test Audio Level

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 17 | VSD9606M501A/B | I6TKA0001 |

Board : AUDIO LCD (VEP04522B)

Test Audio Level may be out of specification. To improve the Test Audio Level, resistor R4051 is changed from 47KΩ to 22KΩ on the foil side.

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| R4051 | ERJ3GEYJ473 | ERJ3GEYJ223 | M. RESISTOR CH 1/16W 22K | 1 | |

| Ref. No. | Schematic Diagram | | P.C.Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| R4051 | 2-71 | C-8 (2/9) | 3-16 | F-1 (F) |

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V 17728

Order No. VSD9611SB618

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Reduction of High Power Consumption

| Please use this supplement together with the Service Manual as follows : | | | |
|---|---|---|---|
| Model No. | Bulletin No. | Order No. | Effective from |
| AJ-D700E/EN | 18 | VSD9606M501A/B | I6TKA0001 |

Board : Power (VEP01643A)

Symptom : Power consumption may be couple of watts higher than specification.

Cause : When the chattering may occur at Power Supply (AC100V), regulator IC voltage is over specification . It results in Regulator IC break.

Remedy : To prevent it, the over-voltage protect circuit is added. The following modification is performed.

1). Change diode D1013 from MA8062-M to MA8100-M on the foil side.
2). Add a diode D1020 (MA142WK) to the pattern on the foil side.
3). Add a transistors Q1025 (2SD1820A-R) and Q1043 (UN5111) to the pattern on the foil side.
4). Add a transistor QR1003 (UN5211) to the pattern on the foil side.
5). Add a resistors (1/16W, 10KΩ) R1084, R1152 and R1156 to the pattern on the foil side.

**Part Number**

| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
|---|---|---|---|---|---|
| D1013 | MA8062-M | MA8100-M | DIODE | 1 | |
| D1020 | — | MA142WK | DIODE | 0→1 | |
| Q1025 | — | 2SD1820A-R | TRANSISTOR | 0→1 | |
| Q1043 | — | UN5111 | TRANSISTOR | 0→1 | |
| QR1003 | — | UN5211 | TRANSISTOR-RESISTOR | 0→1 | |
| R1084 | — | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 0→1 | |
| R1152 | — | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 0→1 | |
| R1156 | — | ERJ3GEYJ103 | M. RESISTOR CH 1/16W 10K | 0→1 | |

| Ref. No. | Schematic Diagram | | P.C.Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| D1013 | 2-68 | B-11 (1/2) | 3-14 | B-2 (F) |
| D1020 | 2-68 | F-10 (1/2) | 3-14 | C-2 (F) |
| Q1025 | 2-68 | D-10 (1/2) | 3-14 | B-2 (F) |
| Q1043 | 2-68 | E-10 (1/2) | 3-14 | C-2 (F) |
| QR1003 | 2-68 | C-11 (1/2) | 3-14 | D-1 (F) |
| R1084 | 2-68 | D-10 (1/2) | 3-14 | B-2 (F) |
| R1152 | 2-68 | D-10 (1/2) | 3-14 | B-2 (F) |
| R1156 | 2-68 | F-10 (1/2) | 3-14 | C-2 (F) |

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VN7728

Order No. VSD9611SB619

# Technical Bulletin

## *Supplement to the Service Manual*

Broadcast Product

## Subject : Reduction of White Vertical Noise

| Please use this supplement together with the Service Manual as follows : | | | |
|---|---|---|---|
| Model No. | Bulletin No. | Order No. | Effective from |
| AJ-D700E/EN | 19 | VSD9606M501A/B | K6TKA0001 |

Board : EVF Video (VEP29022A)

Symptom : White vertical noise may appear on the left side of the monitor.

Cause : As the FET drive circuit is overdriven, FET rising is delayed. It results in vertical noise.

Remedy : To prevent it, resistor R9015 is changed from 2.2KΩ to 9.1KΩ.

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| R9015 | ERJ3GEYJ222 | ERJ3GEYJ912 | M. RESISTOR CH 1/16W 9.1K | 1 | |

| Ref. No. | Schematic Diagram | | P.C.Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| R9015 | 2-86 | B-8 | --- | --- |

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Order No. VSD9611SB620

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Improvement of V Synchronization

| Please use this supplement together with the Service Manual as follows : | | | |
|---|---|---|---|
| Model No. | Bulletin No. | Order No. | Effective from |
| AJ-D700E/EN | 20 | VSD9606M501A/B | K6TKA0001 |

Board : EVF Video (VEP29022A)

Symptom : Vertical sync may not be synchronized.

Cause : As V Free Run frequency depends on +B voltage, V Free Run adjustment value at the tool is changed with connected AJ-D700.

Remedy : To prevent it, V Free Run frequency is changed to center position. The following modification is performed.

1). Delete resistor R9017 (1/10W, 10KΩ) from the component side as shown in figures 1 and 2.
2). Add a resistor R9096 (1/4W, 8.2KΩ) between pin #5 of IC9002 and R9017 after the removing portion on the component side as shown in figures 1 and 2.
3). V Free Run frequency is changed from 43Hz ± 1Hz to 46Hz ± 0.5Hz as shown below.

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| R9017 | VRE0034E103 | — | M. RESISTOR CH 1/10W 10K | 1→0 | |
| R9096 | — | ER0S2CKF8201 | M. RESISTOR 1/4W 8.2K | 0→1 | |

### 10-2. V Free Run Adjustment

| | |
|---|---|
| **BOARD** | H Def |
| **SPEC** | 52 ± 1Hz (NTSC) →<br>43 ± 1Hz (PAL) → |
| **TEST** | TP9002 |
| **ADJUST** | VR9002 |
| **M.EQ** | Frequency Counter |

**54 ± 0.5Hz (NTSC)**
**46 ± 0.5Hz (PAL)**
← **Changed**

1. Adjust the **VR9002** so that the frequency at the **TP9002** is within specification without input signal.

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EVF Video Schematic Diagram

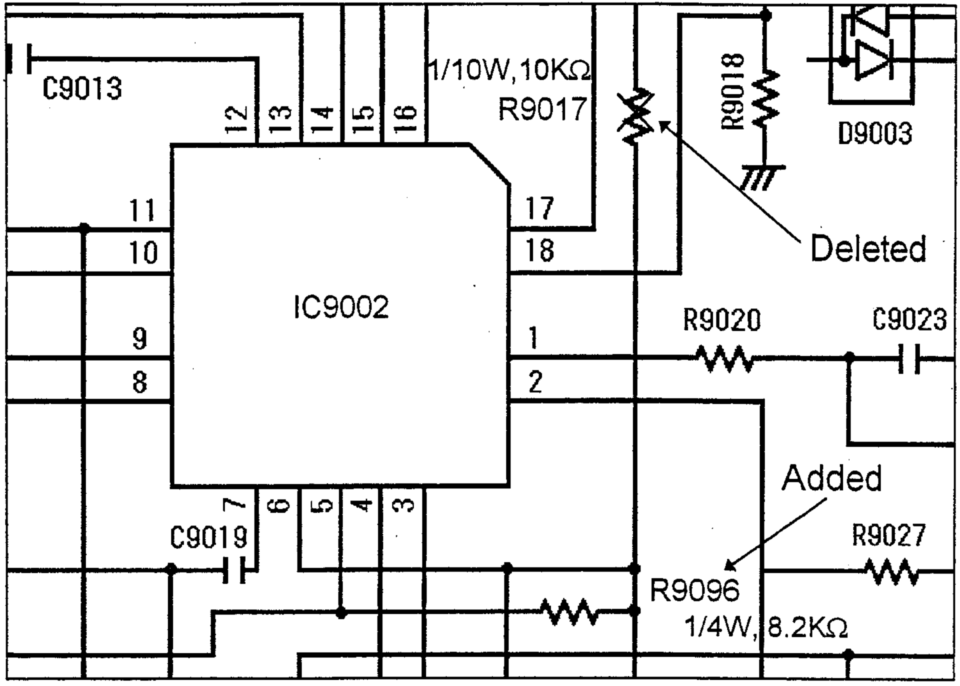
C9013
12
13
14
15
16
1/10W,10KΩ
R9017
R9018
D9003
11
10
17
18
Deleted
IC9002
9
8
1
2
R9020
C9023
Added
7
6
5
4
3
C9019
R9027
R9096
1/4W, 8.2KΩ

Fig. 1 Page 2-86 (D-6)

EVF Video P.C.Board (VEP29022A)

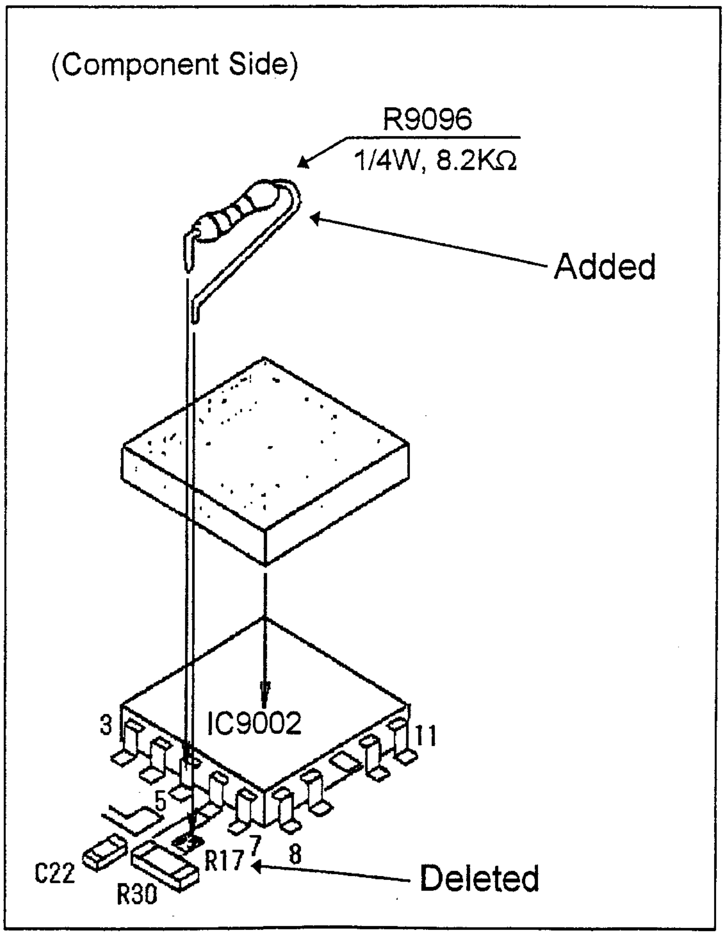
(Component Side)
R9096
1/4W, 8.2KΩ
Added
IC9002
3
11
5
7
8
C22
R30
R17
Deleted

Fig. 2

U A772X

Order No. VSD9611SB621

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Change of ROM Type

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 21 | VSD9606M501A/B | K6TKA0001 |

Board : Video Main (VEP03B96B)

To improve manufacturing productivity, IC501 is changed from one time memory type PROM to masking type PROM.

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| IC501 | VSI2079A | M37709M4L161 | SBC PROM | 1 | |

| Ref. No. | Schematic Diagram | | P.C.Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| IC501 | 2-65 | D-5 (5/7) | 3-12 | B-2 (F) |

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Order No. VSD9611SB622

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Improvement of Burst Level VR Variable Range

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 22 | VSD9606M501A/B | J6TKA0001 |

Board : Camera Encoder (VEP23276B)

Symptom : Burst level cannot be adjusted.

Cause : As the burst ratio conversion output signal is input to the Encoder IC without through the buffer, burst level is decreased.

Remedy : To prevent it, volume VR3007 is changed on the component side.

**Part Number**

| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
|---|---|---|---|---|---|
| VR3007 | EVM7JSX30B53 | EVM7JGA00B23 | VOLUME | 1 | |

| Ref. No. | Schematic Diagram | | P.C.Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| VR3007 | 2-26 | G-5 (3/7) | 3-7 | A-2 (C) |

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Order No. VSD9612SB623

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Improvement of LSI IC

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 23 | VSD9606M501A/B | L6TKA0001 |

Board : Camera DSP (VEP23275A)

To have a timing margin of LSI IC, IC3102 is changed from VY06633 to VY06633A on the foil side.

**Part Number**

| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
|---|---|---|---|---|---|
| IC3102 | VY06633 | VY06633A | IC | 1 | |

| Ref. No. | Schematic Diagram | | P.C.Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| IC3102 | 2-21 | D-9 (2/4) | 3-6 | B-2 (F) |

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Order No. VSD9612SB624

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Improvement of Audio Distortion

| Please use this supplement together with the Service Manual as follows : | | | |
|---|---|---|---|
| Model No. | Bulletin No. | Order No. | Effective from |
| AJ-D700E/EN | 24 | VSD9606M501A/B | L6TKA0001 |

Board : Video Main (VEP03B96B)

Symptom : Audio distortion rate may be big.

Cause : Audio clock jitter may increase due to the noise from the power supply (3.0V) of Audio VCO circuit.

Remedy : To prevent it, the Audio VCO circuit is improved. The following modification is performed.

1). Add a capacitor C150 (25V/0.1µF) to the pattern on the component side.
2). Add a capacitor C151 (25V/0.1µF) to the pattern on the component side.
3). Add a capacitor C152 (6.3V/47µF) to the pattern on the component side.
4). Add an IC IC35 to the pattern on the component side.
5). Delete coils L12 and L23 from the component side.
6). Cut the foil of terminal O of IC35 on the component side as shown in figures 1 and 2.
7). Connect a jumper wire between terminal O of IC35 and land of L23 on the component side as shown in figures 1 and 2.
8). Connect a jumper wire between plus side of C41 and plus side of C152 on the component side as shown in figures 1 and 2.

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| C150, 151 | — | ECUX1E104ZFV | C. CAPACITOR CH 25V 0.1U | 0→2 | |
| C152 | — | ECEV0GV470Q | E. CAPACITOR CH 6.3V 47U | 0→1 | |
| IC35 | — | XC62AP3002P | IC | 0→1 | |
| L12 | — | VLQ0464K6R8 | COIL 6.8UH | 1→0 | |
| L23 | — | VLQ0464K6R8 | COIL 6.8UH | 1→0 | |

| Ref. No. | Schematic Diagram | | P.C.Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| C150 | 2-62 | B-2 (2/7) | 3-12 | A-1 (C) |
| C151 | 2-62 | B-2 (2/7) | 3-12 | A-1 (C) |
| C152 | 2-62 | B-2 (2/7) | 3-12 | A-1 (C) |
| IC35 | 2-62 | B-2 (2/7) | 3-12 | A-1 (C) |
| L12 | 2-62 | D-5 (2/7) | 3-12 | B-1 (C) |
| L23 | 2-62 | E-8 (2/7) | 3-12 | B-1 (C) |

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Video Main (2/7) Schematic Diagram

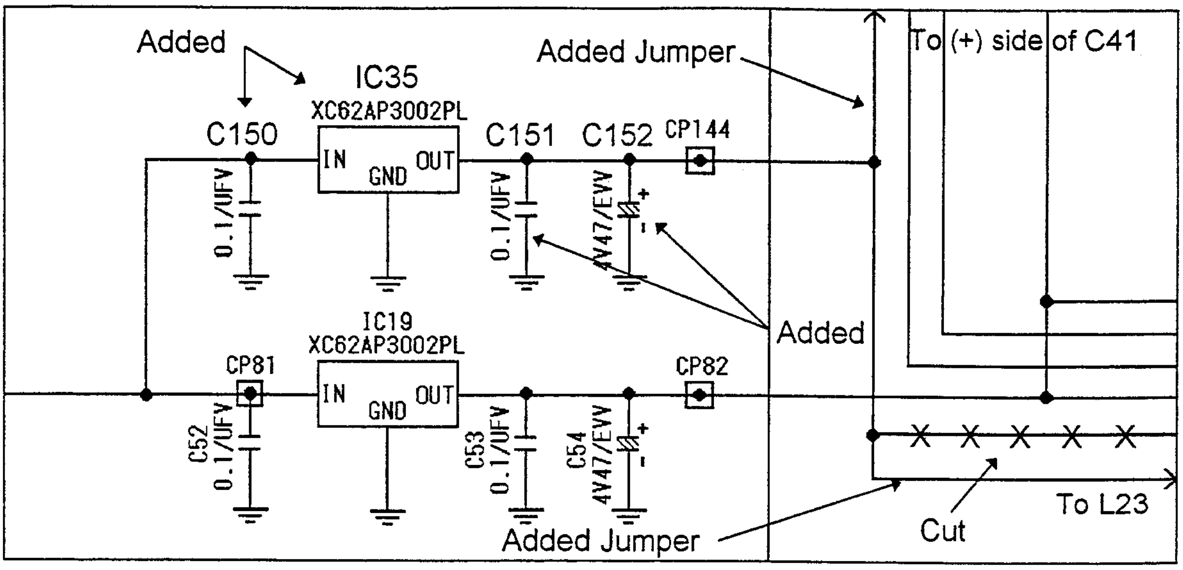
Added
IC35
XC62AP3002PL
Added Jumper
To (+) side of C41
C150
IN
GND
OUT
C151
C152
CP144
0.1/UFV
0.1/UFV
4V47/EVV
Added
IC19
XC62AP3002PL
CP81
CP82
C52
0.1/UFV
C53
0.1/UFV
C54
4V47/EVV
Added Jumper
Cut
To L23

Fig. 1 Page 2-7

Video Main P.C.Board (VEP03B96B)

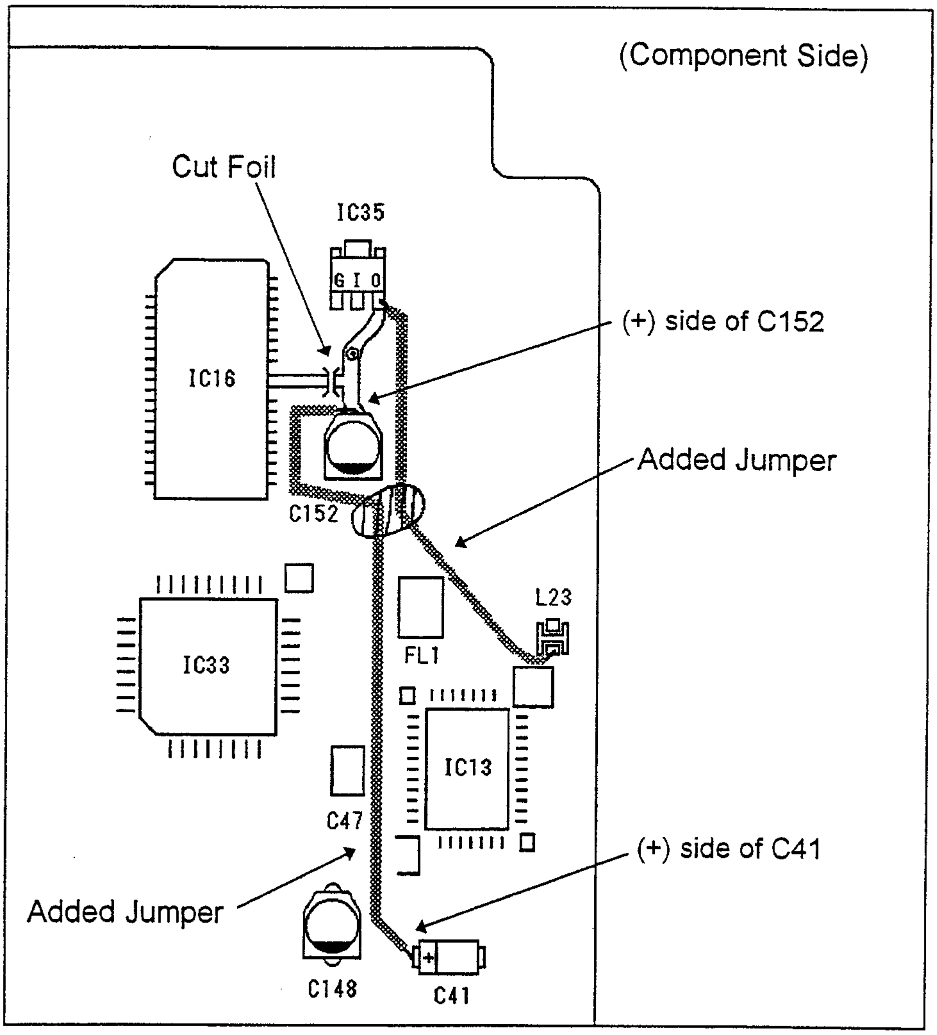
(Component Side)
Cut Foil
IC35
G I O
IC16
(+) side of C152
Added Jumper
C152
IC33
FL1
L23
IC13
C47
(+) side of C41
Added Jumper
C148
C41

Fig. 2 Page 3-12

V17728/V17729
✓

Order No. VSD9701SB625

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Improvement of Time Code Back Up

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 25 | VSD9606M501A/B | A7TKA0001 |

Board : Audio LCD (VEP04522B)

Symptom : 1). Time code back up battery may last about 6 month.
2). Time code count may be shifted during TC Free Run mode when the power is turned OFF.

Cause : 1). Due to the excess process of LCD micro-computer during power save mode.
2). Due to the TC back up process malfunction of LCD micro-computer.

Remedy : To improve the above matters, the following modification is performed.

*** The unit produced before Serial Number L6TKA******
LCD micro-computer IC6501 is changed from UPD75316BE58 to UPD75316BE83

| Part Number | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| IC6501 | UPD75316BE58 | UPD75316BE83 | IC | 1 | |

*** The unit produced after Serial Number L6TKA******
LCD micro-computer IC6501 is changed from VSI2449 to UPD75316BE83.

| Part Number | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| IC6501 | VSI2449 | UPD75316BE83 | IC | 1 | |

| Ref. No. | Schematic Diagram | | P.C.Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| IC6501 | 2-76 | C~D-3~4 (7/9) | 3-17 | F-1 (F) |

**< Modification Method >**

1. Loosen the 4 screws (A) and remove the Right Side Panel.
2. Loosen the 5 screws (B) and remove the insulation sheet on the Audio LCD Board.
3. Replace the Back Up battery (CR2032) on the Backup Battery P.C.Board to new one.

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4. Replace IC6501 on the Audio LCD P.C.Board from UPD75316BE58 or VSI2449 to UPD75316BE83 as follows;
   1). Unsolder the solder of the IC6501. (UPD75316BE58 or VSI2449)
   2). Float all legs of IC6501 warming the legs.
   3). Confirm that all legs of IC6501 are completely come off from the Board.
   4). Attach the bit of minus driver which wrapped up with the cellophane adhesive tape to the one corner of the IC, and hit the driver with the light hammer.
   5). Repeat this step to the other corners and then remove the IC.

   * Note * Be careful that do not damage the foil under the IC6501 due to the strong adhesive when remove IC.

   6). Install new IC6501 (UPD75316BE83).
5. After above modification, the following items are confirmed.
   1). Display Tube Confirmation
      a). Confirm that the Display Tube is indicated during Power ON.
      b). Confirm that the Display Tube is observed that there is no display missing.
   2). LCD Light SW Confirmation
      a). Confirm that the LCD light is turned ON during LCD light SW ON.
   3). MENU SW Confirmation
      a). Confirm that the Menu in the EVF is indicated when the Menu SW is turned ON.
   4). Color Bar/Camera Switching Confirmation
      a). When the Color Bar/Camera SW is switched to BARS, confirm that the color bar is indicated in the EVF and the TEST signal of Audio is output. (AUDIO IN SW is Front side)
   5). CTL/TC Switching Confirmation
      a). Confirm that the characters of DF and TCG are indicated in the Display Tube when the CTL/TC SW is switched to TC side.
      b). Confirm that the DF and TCG display are disappeared when the CTL/TC SW is switched to CTL side.
   6). TC RESET Confirmation
      a). Confirm that the CTL/TC SW is turned to TC side and TCG SW is turned to F-RUN.
      b). Confirm that the TCG SW is turned to SET when the time code is proceeded about 10 counts.
      c). Confirm that the hour position of time code count is stopped after flashing and then the time code count is reset when press the RESET button.
   7). SUPER IRIS Confirmation
      a). Confirm that the ON/OFF of Super Iris is indicated in the EVF pressing the Super Iris button.
   8). MIC Input Front/Rear Confirmation
      a). Confirm on the LCD Display that Audio sound is input from the MIC IN when the MIC is connected setting the AUDIO IN to FRONT MIC side.
      b). Confirm on the LCD Display that Audio sound is input from the MIC IN when the MIC is connected to the AUDIO IN on the rear side setting the AUDIO IN to REAR MIC side. (Both CH1 and CH2)
      * Note * Be careful the monitor setting during REAR MIC confirmation.
   9). POWER SW Confirmation
      a). Confirm that the Power Supply is functioned normally when the Power SW is turned ON/OFF repeatedly.
      b). Confirm that the Display Tube and LCD Light are indicated normally when the Power is turned ON.
   10). RECRUN, SET, FREE and HOLD Confirmation
      a). Confirm that the TCG SW is set to R-RUN when the CTL/TC SW is set to TC side after inserting the tape.
      b). Confirm that the TC count is proceeded at only REC mode and stop it at REC/PAUSE mode.
      c). Confirm that the Hour position of time code count is flashed when the TCG SW is turned to SET side.
      d). Confirm that the TC count is proceeded with no relation to mode setting when the TCG SW is turned to FREE side.
      e). Confirm that the TC count is held when the HOLD button is pressed proceeding the Time Code count.
   11). REAR MIC Jitter Noise Confirmation
      a). Confirm that the AUDIO IN is set to REAR MIC side with no audio input.
      b). Confirm the audio sound on the Headphone OUT that there is no jitter noise.
      * Note * When the jitter noise may appear, confirm the flat cable on the LCD panel again.
   12). Warning Lamp Confirmation
      a). Confirm that the no recorded portion of the tape is played back.
      b). Confirm that the Warning Lamp is flashed after play back it for a while.
      * Note * Confirm the tape remaining display during Playback mode.

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13). MENU Initial Setting

a). Confirm that the MENU is indicated in the EVF after turn the MENU SW ON pressing the [SHIFT], [+], [-] and [PAGE] buttons simultaneously.

b). Confirm that the MENU screen is set to DESIGN pressing the PAGE button.

c). Confirm that the cursor "→" is set to "MENU ALL INIT" pressing the SHIFT button.

d). Confirm that the "INIT OK" is indicated pressing the [+] or [-] button.

14). Initial SW Setting is as follows. (Factory Setting)

| SW Name | Setting | Factory Setting |
|---|---|---|
| LIGHT | ON/OFF | OFF |
| DISPLAY | CTL/TC/UB | CTL |
| MONITOR | CH1/CH1·2/CH2 | CH1·2 |
|  | ST/MIX | ST |
| RET VIDEO | INT/EXT | INT |
| AUDIO IN | CH1 (FRONT MIC/REAR MIC/REAR LINE) | FRONT (MIC) |
|  | CH2 (FRONT MIC/REAR MIC/REAR LINE) | FRONT (MIC) |
| AUDIO SELECT | CH1 (AUTO/MAN) | AUTO |
|  | CH2 (AUTO/MAN) | AUTO |
| TCG | F-RUN/SET/R-RUN | R-RUN |
| MENU | SET/OFF | OFF |
| POWER | ON/OFF | OFF |
| VTR | SAVE/STBY | STBY |
| GAIN | H/M/L | L |
| OUTPUT | BARS. AUTO KNEE OFF/<br>CAM. AUTO KNEE OFF/<br>CAM. AUTO KNEE ON | CAM. AUTO KNEE ON |
| WHITE BAL | PRST/A/B | B |
| SHUTTER | OFF/ON/SEL | OFF |
| AUTO W/B BAL | AWB/ABB | CENTER |
| BACK TALLY | ON/OFF | OFF |
| ANTON BRACKET | LIGHT CONTROL ON/OFF | OFF |
| ALARM | ALARM | CENTER |
| MONITOR | MONITOR | CENTER |
| AUDIO LEVEL CH1 | AUDIO LEVEL CH1 | CENTER |
| AUDIO LEVEL CH2 | AUDIO LEVEL CH2 | CENTER |
| AUDIO CH1 | AUDIO CH1 | MAX |
| FILTER | FILTER | 1 |

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Order No. VSD9705SB639

# Technical Bulletin

## Supplement to the Service Manual

**Broadcast Product**

## Subject : Improvement of Cleaner Roller Rotation

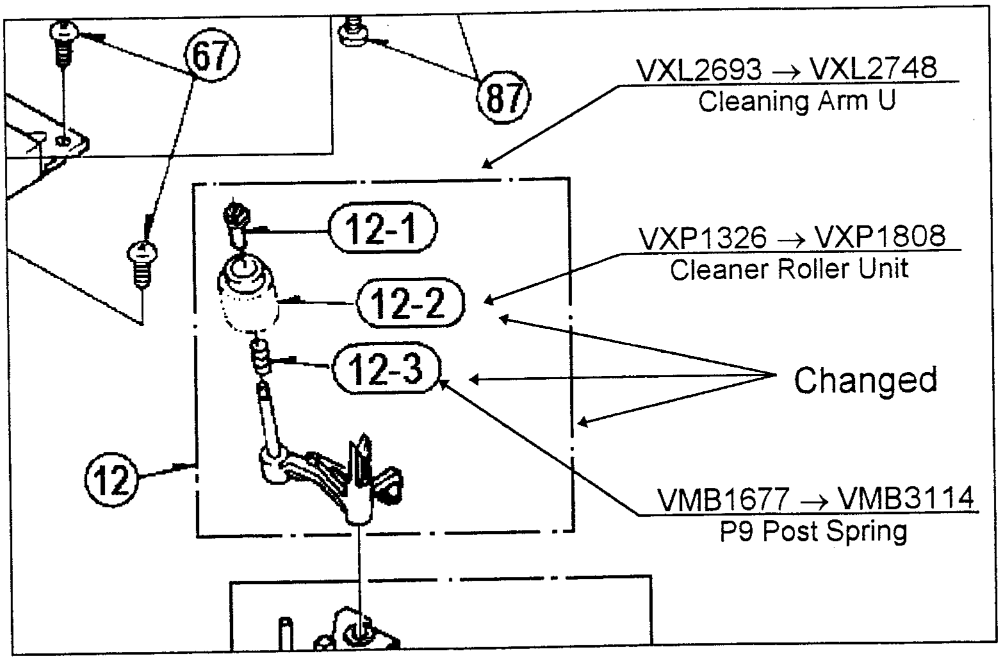
Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 39 | VSD9606M501A | K6TKA0001 |

Mechanical Chassis Assembly (2)

To be the Cleaner Roller rotation stable, the Cleaning Arm Unit is changed as follows.

| Part Number | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| 12 | VXL2693 | VXL2748 | CLEANING ARM U | 1 | |
| 12-2 | VXP1326 | VXP1808 | CLEANER ROLLER UNIT | 1 | |
| 12-3 | VMB1677 | VMB3114 | P9 POST SPRING | 1 | |


67
87
VXL2693 → VXL2748
Cleaning Arm U
12-1
12-2
12-3
VXP1326 → VXP1808
Cleaner Roller Unit
Changed
12
VMB1677 → VMB3114
P9 Post Spring

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√ VA7728 + VA7728

Order No. VSD9705SB641

# Technical Bulletin

***Supplement to the Service Manual***

**Broadcast Product**

## Subject : Reduction of Block Error Noise

| Please use this supplement together with the Service Manual as follows : | | | |
|---|---|---|---|
| Model No. | Bulletin No. | Order No. | Effective from |
| AJ-D700E/EN | 41 | VSD9606M501A/B | C7TKA0001 |

Board : Video Main (VEP03B96B)

Symptom : Block Error noise may appear on the picture.

Cause : Due to the IC bug.

Remedy : To reduce the Block Error noise, IC3 is changed from MN67371F to MN673711 on the foil side.

**Part Number**

| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
|---|---|---|---|---|---|
| IC3 | MN67371F | MN673711 | IC | 1 | |

| Ref. No. | Schematic Diagram | | P.C.Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| IC3 | 2-61 | B~C-1~3 (1/7) | 3-12 | C-2 (F) |

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Order No. VSD9705SB643-1

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Improvement of PCM Audio Noise (Audio VCO)

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 43 | VSD9606M501A/B | D7TKA0001 |

Board : VTR System Control (VEP06A22B)
Video Main (VEP03B96B)

Symptom : PCM Audio noise may recorded under low temperature.

Cause : Audio VCO PLL may not be locked under low temperature.

Remedy : To reduce the PCM Audio noise, the following modification is performed.

< VTR System Control >

1). PROM IC6006 software version is up-graded from 1.2 to 1.3.

| Part Number | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| IC6006 | VSI2334B | VSI2334C | VTR SYSCON PROM Ver. 1.3 | 1 | |

< TEST MENU >

CAM SYSCON IC3502 : 1.2 098A
CAM SYSCON IC3505 : 1.2 D423
* VTR SYSCON IC6006 : 1.3 96B0

*** Note ***

**1). When PROM is replaced, PROM Socket Cover must be replaced to new one at the same time as follows.**

**2). When PROM is replaced, MENU setting is returned to factory setting. If the MENU setting is returned to user setting, MENU data is saved to IC CARD before replacement of PROM.**

**Regarding above method, please refer to the Technical Bulletin No. VSD9610SB614.**

< Video Main >

1). Resistor R71 is changed from 0Ω to 1.5KΩ on the component side as shown in figures 1 and 2.

2). Resistor R70 (VRT0145) is added between R71 and R73 (GND side) on the component side as shown in figures 1 and 2.

* Note * After this modification, 6-1. AUDIO VCO Adjustment is required. Please refer to the Service Manual Page 4-26.

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**Part Number**

| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
|---|---|---|---|---|---|
| R70 | --- | VRT0145 | THERMISTER | 0→1 | |
| R71 | ERJ3GEY0R00 | ERJ3GEYJ152 | M. RESISTOR CH 1/16W 1.5K | 1 | |

Video Main (2/7) Schematic Diagram

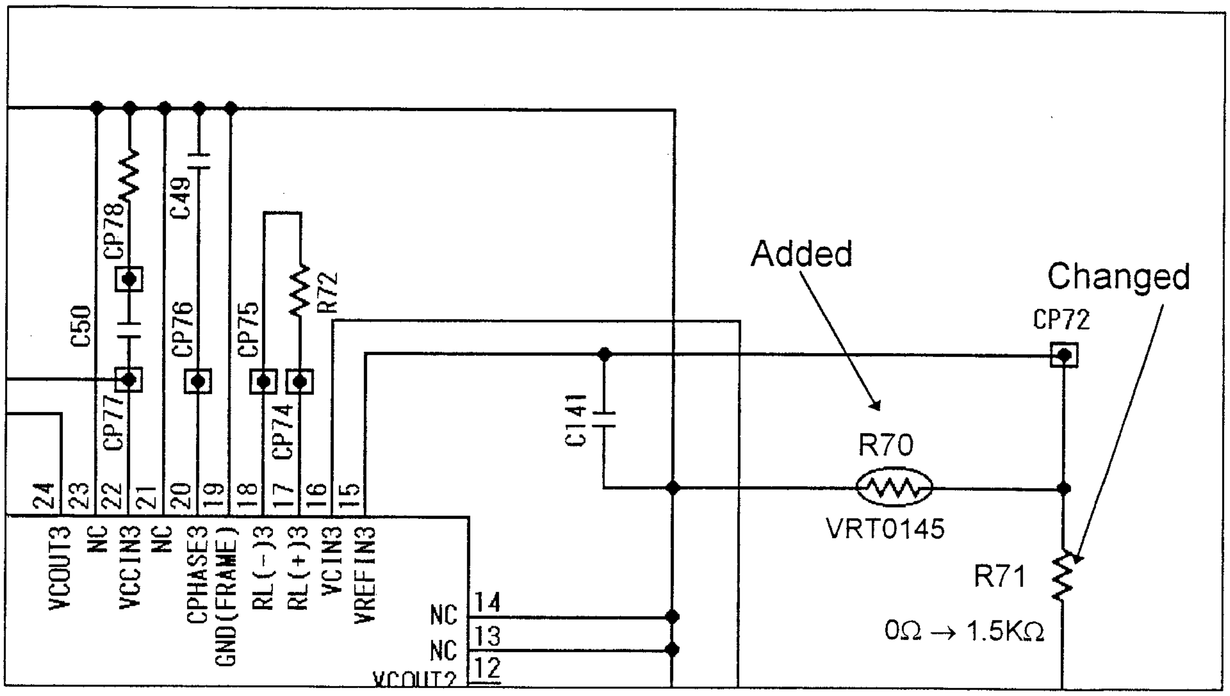
Added
Changed
CP72
C50
CP78
C49
CP76
CP75
R72
CP77
CP74
C141
R70
VRT0145
R71
0Ω → 1.5KΩ
24
23
22
21
20
19
18
17
16
15
VCOUT3
NC
VCCIN3
NC
CPHASE3
GND(FRAME)
RL(-)3
RL(+)3
VCIN3
VREFIN3
NC 14
NC 13
VCOUT2 12

Fig. 1 Page 2-62 (E-8)

Video Main P.C.Board (VEP03B96B)

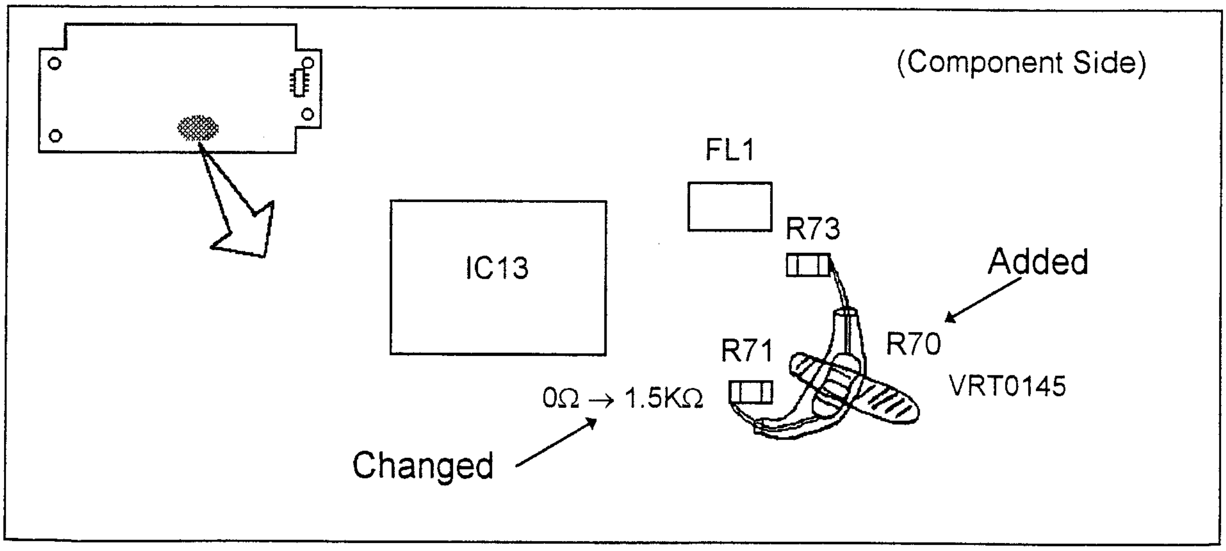
(Component Side)
FL1
R73
Added
IC13
R71
R70
VRT0145
0Ω → 1.5KΩ
Changed

Fig. 2 Page 3-12 (B-1)

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Order No. VSD9705SB643-2

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Improvement of PCM Audio Noise (Audio VCO)

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 43B | VSD9606M501A/B | D7TKA0001 |

Board : VTR System Control (VEP06A22B)
Video Main (VEP03B96B)

Symptom : PCM Audio noise may be recorded under low temperature.

Cause : Audio VCO PLL may not be locked under low temperature.

Remedy : To reduce the PCM Audio noise, the following modification is performed.

< VTR System Control >

1). PROM IC6006 software version is up-graded from 1.2 to 1.3.

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| IC6006 | VSI2334B | VSI2334C | VTR SYSCON PROM Ver. 1.3 | 1 | |

< TEST MENU >

CAM SYSCON IC3502 : 1.2 098A
CAM SYSCON IC3505 : 1.2 D423
* VTR SYSCON IC6006 : 1.3 96B0

**This is the revision of the Technical Bulletin No. VSD9705SB643/VSD9705SB643-1. Please substitute new Technical Bulletin No. VSD9705SB643-2 for the old ones. (VSD9705SB643/VSD9705SB643-1)**

*** Note * (Bold letters in the notes are changed portions of this revised Technical Bulletin)**

1). Regarding below method, please refer to the Technical Bulletin No. **VSD9610SB614-1.**
   a). When PROM is replaced, PROM Socket Cover must be replaced to new one at the same time.
   b). When PROM is replaced, MENU setting is returned to factory setting. If the MENU setting is returned to user setting, MENU data is saved to IC CARD before replacement of PROM.

**2). After installing R70, fix it by glue as shown below.**

< Video Main >

1). Resistor R71 is changed from 0Ω to 1.5KΩ on the component side as shown in figures 1 and 2.

2). Resistor R70 (VRT0145) is added between R71 and R73 (GND side) **and then fix it by glue** on the component side as shown in figures 1 and 2.

*** Note *** After this modification, 6-1. AUDIO VCO Adjustment is required. Please refer to the Service Manual Page 4-26.

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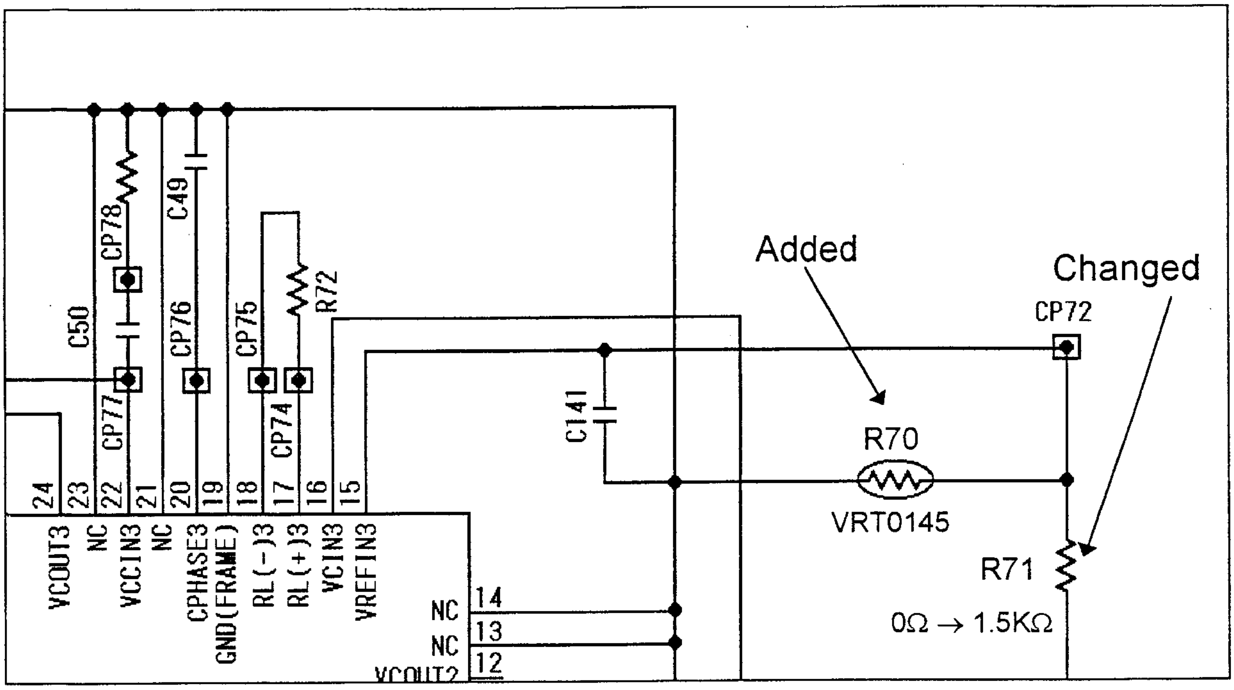
| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| R70 | --- | VRT0145 | THERMISTER | 0→1 | |
| R71 | ERJ3GEY0R00 | ERJ3GEYJ152 | M. RESISTOR CH 1/16W 1.5K | 1 | |

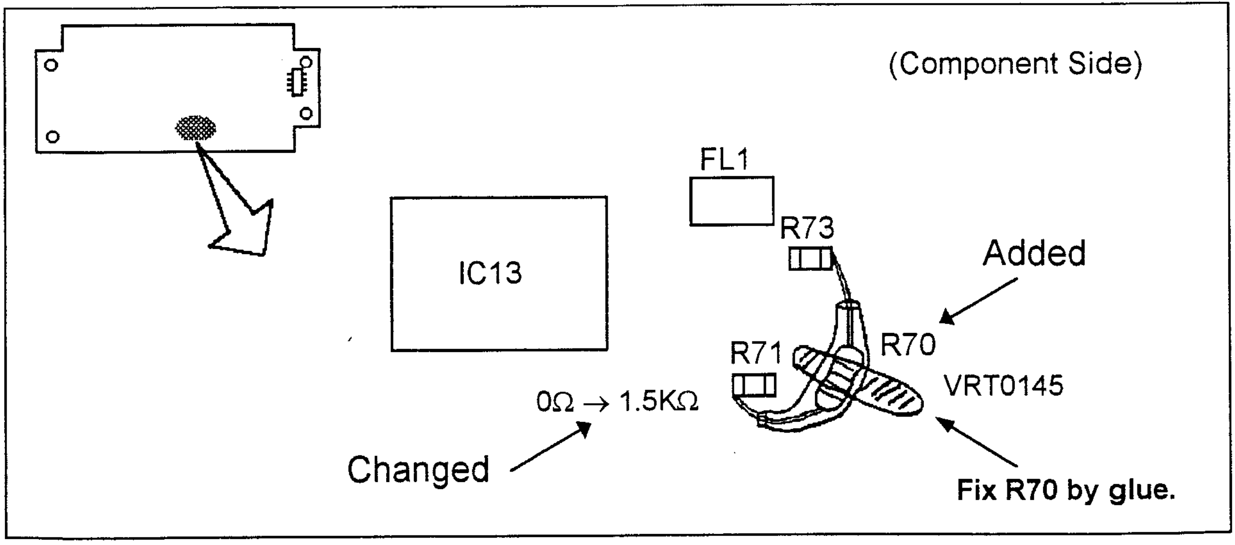
Video Main (2/7) Schematic Diagram



C50
CP78
C49
CP76
CP75
R72
CP77
CP74
C141
Added
Changed
CP72
R70
VRT0145
R71
0Ω → 1.5KΩ
24
23
22
21
20
19
18
17
16
15
VCOUT3
NC
VCCIN3
NC
CPHASE3
GND(FRAME)
RL(-)3
RL(+)3
VCIN3
VREFIN3
NC 14
NC 13
VCOUT2 12

Fig. 1 Page 2-62 (E-8)

Video Main P.C. Board (VEP03B96B)



(Component Side)
FL1
R73
IC13
Added
R71
R70
VRT0145
0Ω → 1.5KΩ
Changed
Fix R70 by glue.

Fig. 2 Page 3-12 (B-1)

9728

Order No. VSD9706SB644

# Technical Bulletin

## *Supplement to the Service Manual*

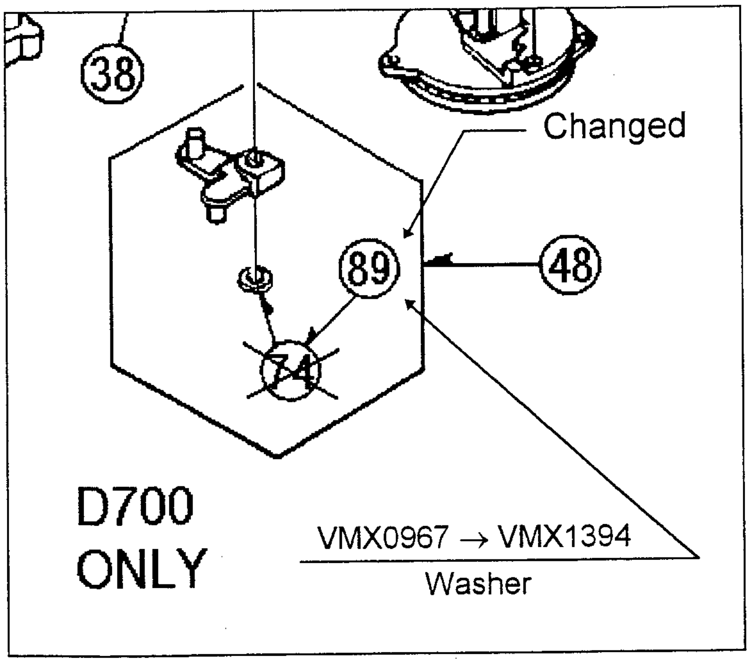
**Broadcast Product**

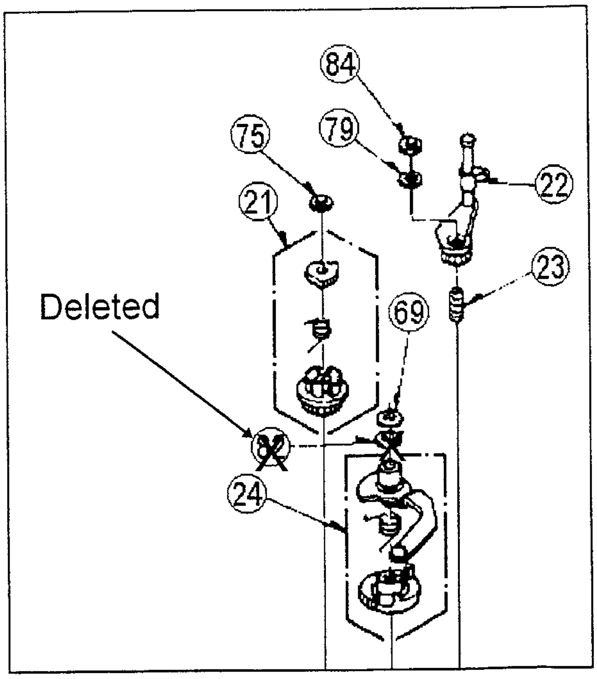
## Subject : Service Manual Correction

| Please use this supplement together with the Service Manual as follows : | | | |
|---|---|---|---|
| Model No. | Bulletin No. | Order No. | Effective from |
| AJ-D700E/EN | 44 | VSD9606M501A | --- |

Mechanical Chassis Assembly (2)

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| 74 | VMX0967 | --- | WASHER | 1→0 | |
| 82 | XWGV15Z32G | --- | WASHER | 1→0 | |
| 89 | --- | VMX1394 | WASHER | 0→1 | |


38
Changed
89
48
~~74~~
D700
ONLY
VMX0967 → VMX1394
Washer


84
75
79
22
21
23
Deleted
69
~~82~~
24

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V'17728

Order No. VSD9706SB645

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Change of Screws

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 45 | VSD9606M501A | A7TKA0001 |

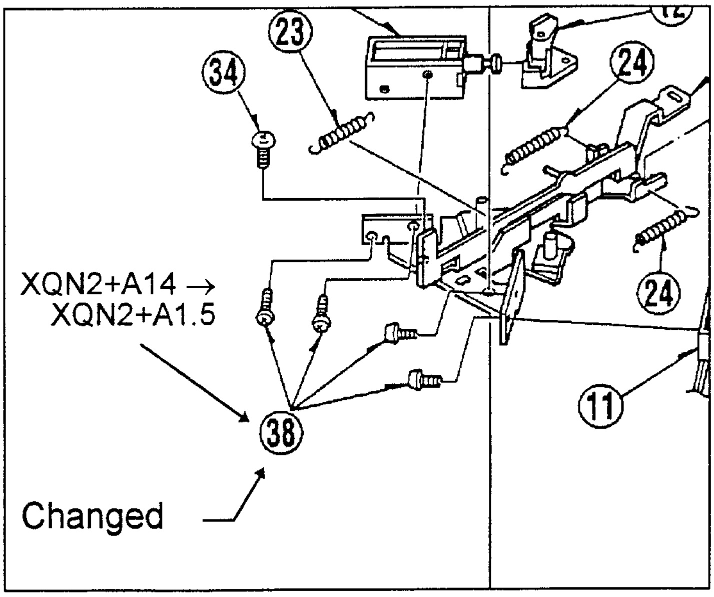
Mechanical Chassis Assembly (1)
Mechanical Chassis Assembly (2)

### Reason for Change

- ☐ The following part(s) has(have) been changed for serviceability improvement.
- ■ The following part(s) has(have) been changed for productivity improvement.
- ☐ The following part(s) has(have) been changed for standardization.
- ☐ The following part(s) has (have) been changed for the safety regulation.

Mechanical Chassis Assembly (1)

| Part Number | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| 38 | XQN2+A14 | XQN2+A1.5 | SCREW | 4 | |



TM3446

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17728

Order No. VSD9706SB647

# Technical Bulletin

## *Supplement to the Service Manual*

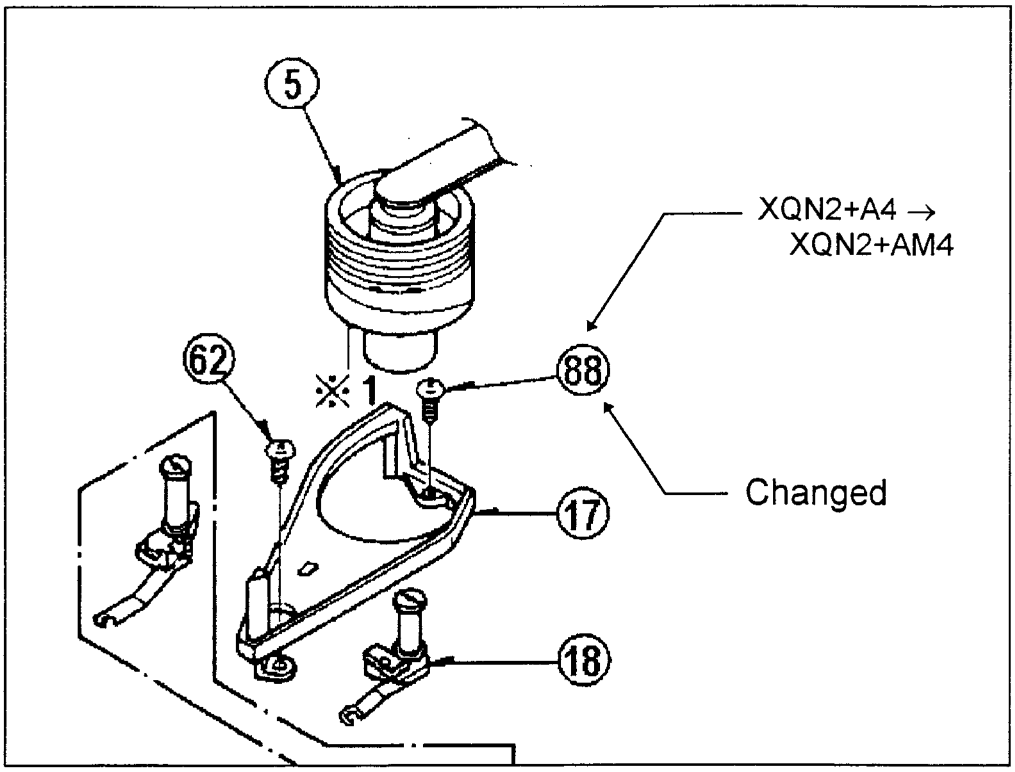
**Broadcast Product**

## Subject : Service Manual Correction

| Please use this supplement together with the Service Manual as follows : | | | |
|---|---|---|---|
| Model No. | Bulletin No. | Order No. | Effective from |
| AJ-D700E/EN | 47 | VSD9606M501A | --- |

Mechanical Chassis Assembly (2)

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| 88 | XQN2+A4 | XQN2+AM4 | SCREW | 1 | |



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7 26 vorh.
7 28 ✓
8 5
10 16 1 vorh.

Order No. VSD9706SA677

# Technical Bulletin

## Supplement to the Service Manual

**Broadcast Product**

### Subject : Extension of Maintenance Time

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D750E/EN | 77 | VSD9606M502A | |
| AJ-D700E/EN | 48 | VSD9606M501A | |
| AJ-D650E | 49 | VSD9612MJ01A | |
| AJ-D640E | 49 | VSD9612MJ01A | |
| AJ-D800E/EN | 1 | VSD9708M606A | |

The Maintenance Time has been extended after investigation of each parts durability.

The listed maintenance time is based on head rotation time, unless it is otherwise state as based on Operation Time.

(Unit hours)

| | Current AJ-D700<br>AJ-D800 | Current AJ-D750<br>AJ-D650<br>AJ-D640 | New Common | Remark |
|---|---|---|---|---|
| Cylinder Unit | 1,000 | 1,500 | 2,000 | |
| Pinch Arm Unit | 1,000 | 1,500 | 4,000 | |
| Cleaning Arm Unit | 1,000 | 1,500 | 2,000 | |
| S Reel (Rotor Unit) | 1,000 | 6,000 | 6,000 | |
| T Reel (Rotor Unit) | 1,000 | 6,000 | 6,000 | |
| Thrust Screw Unit | Not Listed | Not Listed | 6,000 | Newly added |
| S1 Loading Arm Unit | 3,000 | 3,000 | 12,000 | Replaced with Mech. Chassis Unit |
| T1 Boat Unit | 3,000 | 3,000 | 12,000 | Replaced with Mech. Chassis Unit |
| S5 Post Unit | 3,000 | 3,000 | 12,000 | Replaced with Mech. Chassis Unit |
| Tension Arm Unit | 3,000 | 3,000 | 12,000 | Replaced with Mech. Chassis Unit |
| S Brake Arm Unit | Not Listed | Not Used | 6,000 | |
| T Brake Arm Unit | Not Listed | Not Used | 6,000 | |
| Front Loading Unit | Not Used | 6,000 | 12,000 | Replaced with Mech. Chassis Unit |
| Mech. Chassis Unit | 3,000 | 6,000 | 12,000 | |
| 1.5" CRT (EVF) | Not Listed | Not Used | 5,000 | Operation Time. |
| Fan Motor | Not Used | 3,000 | 10,000 | Operation Time (Current head rotation time) |
| LCD Display | Not Used | Not Listed | 10,000 | Operation TimeAJ-LT75 only |

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# 1. AJ-D700E/EN / AJ-D800E/EN Maintenance
## Maintenance Schedule

| | Name | Part Number | Hours of Use ( hours) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2,000 | 4,000 | 6,000 | 8,000 | 10,000 | 12,000 |
| | Tape Path Cleaning | | △ Clean the Tape Path at each 500 hours | | | | | |
| 1 | Cylinder Unit | VEG1337 | ● | ● | ● | ● | ● | ◎ |
| 2 | Pinch Arm Unit | VXL2684 | | ●＊1 | | ●＊1 | | ◎ |
| 3 | Cleaning Arm Unit | VXL2748 | ● | ● | ● | ● | ● | ◎ |
| 4 | S Reel(Rotor Unit) | VEM0629 | | | ● | | | ◎ |
| 5 | T Reel(Rotor Unit) | VEM0630 | | | ● | | | ◎ |
| 6 | S Brake Arm Unit | VXL2705 | | | ● | | | ◎ |
| 7 | T Brake Arm Unit | VXL2706 | | | ● | | | ◎ |
| 8 | Thrust Screw Unit | VXQ0556 | | | ● | | | ◎ |
| 9 | Mech. Chassis Unit | VXY1229 | | | | | | ● |
| 10 | 1.5" CRT (EVF) | M04KYS07WB | Replace the CRT at each 5,000 hours ***Operation Time***. | | | | | |

**Note:** Hours of Use are based on the head rotation hours.

Hours of Use are recommendation. It may depend on temperature, humidity or dust.

Hours of Use are listed as the reference of maintenance. They do not mean guaranteed hours.

◎:These parts are included in Mech. Chassis Unit. Replacing Mech. Chassis Unit is recommended.

＊1. The lubrication is necessary when replacing the Pinch Arm Unit.

△:This mark means cleaning is necessary. Detail cleaning procedures are written in Service Manual.

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## 2. AJ-D750E/EN / AJ-D650E / AJ-D640E Maintenance Maintenance Parts Chart

| | Name | Part Number | Hours of Use (unit hours) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2,000 | 4,000 | 6,000 | 8,000 | 10,000 | 12,000 |
| | Tape Path Cleaning | | △ Clean the Tape Path at each 500 hours | | | | | |
| 1 | Cylinder Unit | VEG1337 | ● | ● | ● | ● | ● | ◎ |
| 2 | Pinch Arm Unit | VXL2684 | | ●＊1 | | ●＊1 | | ◎ |
| 3 | Cleaning Arm Unit | VXL2748 | ● | ● | ● | ● | ● | ◎ |
| 4 | S Reel Motor A Unit | VEM0635 | | | ● | | | ◎ |
| 5 | T Reel Motor A Unit | VEM0636 | | | ● | | | ◎ |
| 6 | Thrust Screw Unit | VXQ0556 | | | ● | | | ◎ |
| 7 | Cassette Compartment Unit | VXA5979 | | | | | | ● |
| 8 | Mech. Chassis Unit | VXY1254Z1 | | | | | | ● |
| 9 | Fan Motor | VRF0190 | Replace Fan Motor at each 10,000 hours ***Operation Time***. | | | | | |

**Note:** Hours of Use are based on the head rotation hours.

Hours of Use are recommendation. It may depend on temperature, humidity or dust.

Hours of Use are listed as the reference of maintenance. They do not mean guaranteed hours.

◎:These parts are included in Mech. Chassis Unit. Replacing Mech. Chassis Unit is recommended.

＊1. The lubrication is necessary when replacing the Pinch Arm Unit.

△:This mark means cleaning is necessary. Detail cleaning procedures are written in Service Manual.

Order No. VSD9710SA701

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

### Subject : Improvement of Audio Mute during Playback Mode

Please use this supplement together with the Service Manual as follows :

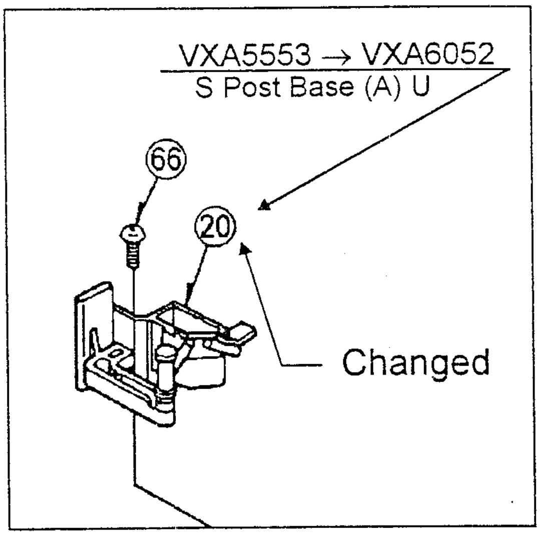
| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D750E/EN V17726+V17727 | 101 | VSD9606M502A | G7TRB0001 |
| AJ-D700E/EN V17728+V17729 | 58 | VSD9606M501A | G7TKA0001 |
| AJ-D650E V18115+V18116 | 74 | VSD9612MJ01A | G7TRA0001 |
| AJ-D640E 〃 〃 | 74 | VSD9612MJ01A | G7TRA0001 |

Mechanical Chassis Assembly (2)

Symptom : Audio mute may occur during Playback mode.

Remedy : To improve the reliability and durability of the S5 Roller Post, the S Post Base Unit is changed from VXA5553 to VXA6052 as shown below.

| Part Number | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| 20 | VXA5553 | VXA6052 | S POST BASE A U | 1 | |



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Order No. VSD9710SA710

# Technical Bulletin

## *Supplement to the Service Manual*

Broadcast Product

## Subject : Addition of Mode SW Cover

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D750E/EN | 110 | VSD9606M502A | I7TRB0001 |
| AJ-D650E | 81 | VSD9612MJ01A | I7TRA0001 |
| AJ-D640E | 81 | VSD9612MJ01A | I7TRA0001 |
| AJ-LT75E | 27 | VSD9707M602A | I7TNA0001 |
| AJ-D230E | 21 | VSD9708M605 | I7TDA0001 |
| AJ-D700E/EN | 65 | VSD9606M501A | I7TKA0001 |
| AJ-D800E/EN | 14 | VSD9708M606A | I7TKA0001 |
| AJ-D200HE | 17 | VSD9708M604 | I7TKA0001 |

Mechanical Chassis Assembly (2)

Symptom : Mode SW may be malfunctioned.

Cause : Sharpened powder of the Solenoid Base may fall on the Mode SW. It results in Mode SW malfunction.

Remedy : To prevent it, the Mode SW Cover (VMZ2737) is added to the Mode SW unit as shown below.

**Part Number**

| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
|---|---|---|---|---|---|
| 57 | — | VMZ2737 | MODE SW COVER | 0→1 | |
| 90 | — | XQN2+CF6 | SCREW | 0→1 | Not listed in parts list |

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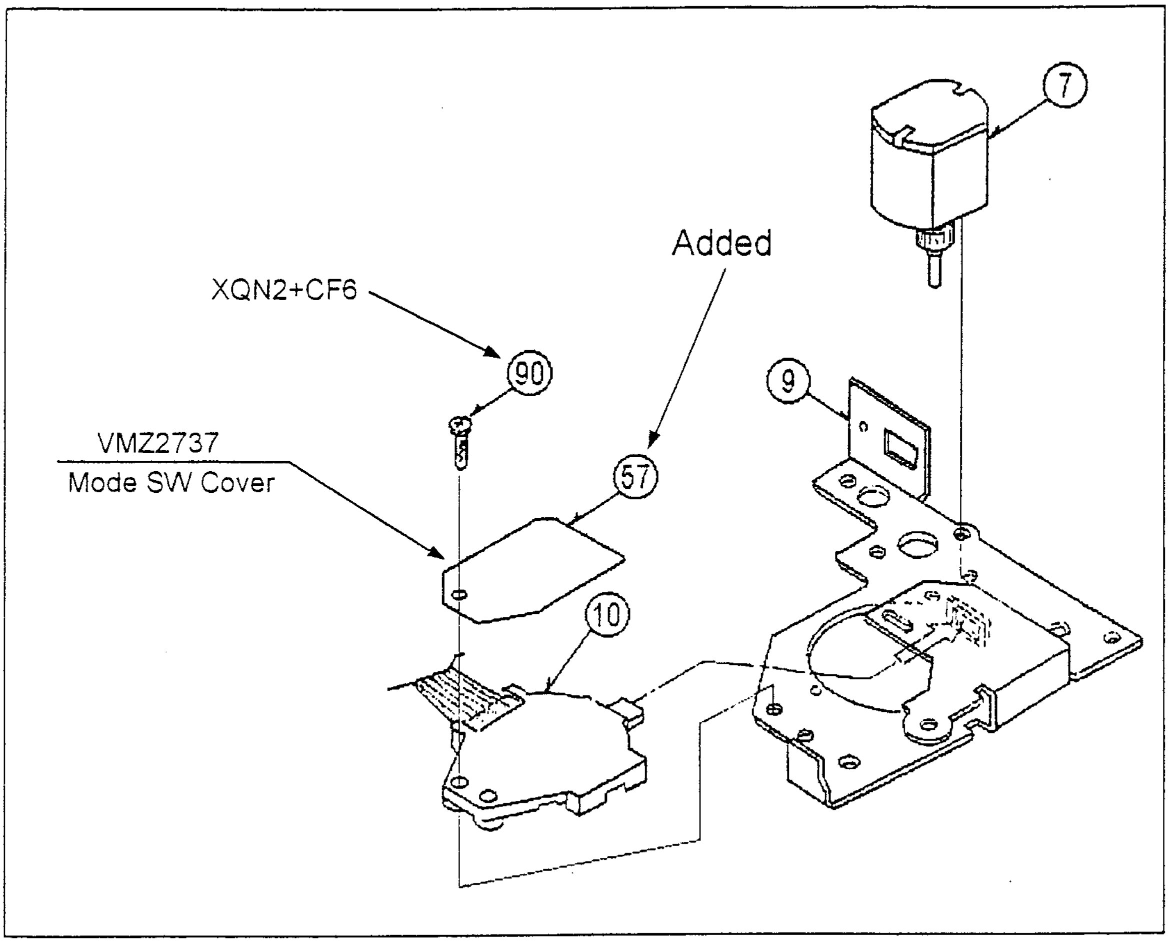
7
Added
XQN2+CF6
90
9
VMZ2737
Mode SW Cover
57
10

✓ [illegible] + [illegible]

Order No. VSD9710SB648

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Improvement of QUAD Adjustment

| Please use this supplement together with the Service Manual as follows : | | | |
|---|---|---|---|
| Model No. | Bulletin No. | Order No. | Effective from |
| AJ-D700E/EN | 49 | VSD9606M501A/B | D7TKA0001 |

Board : Camera ENC (VEP23276B)
Video I/F (VEP03D53A)

To have a margin to capacitor for QUAD Adjustment, the following modification is performed.

< Camera ENC >
1). Capacitor C3026 is changed from 50V/10pF to 50V/6pF on the foil side.

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| C3026 | ECUX1H100DCV | ECUX1H060DCV | C. CAPACITOR CH 50V 6P | 1 | |

| Ref. No. | Schematic Diagram | | P.C.Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| C3026 | 2-26 | F-4 (3/7) | 3-7 | A-2 (F) |

< Video I/F >
1). Capacitor C639 (50V/10pF) is deleted from the component side.

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| C639 | ECUX1H100DCV | --- | C. CAPACITOR CH 50V 10P | 1→0 | |

| Ref. No. | Schematic Diagram | | P.C.Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| C639 | 2-37 | F-6 (6/7) | 3-9 | B-2 (C) |

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Order No. VSD9710SB649

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Improvement of Reel Motor Unit

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 50 | VSD9606M501A | E7TKA0001 |

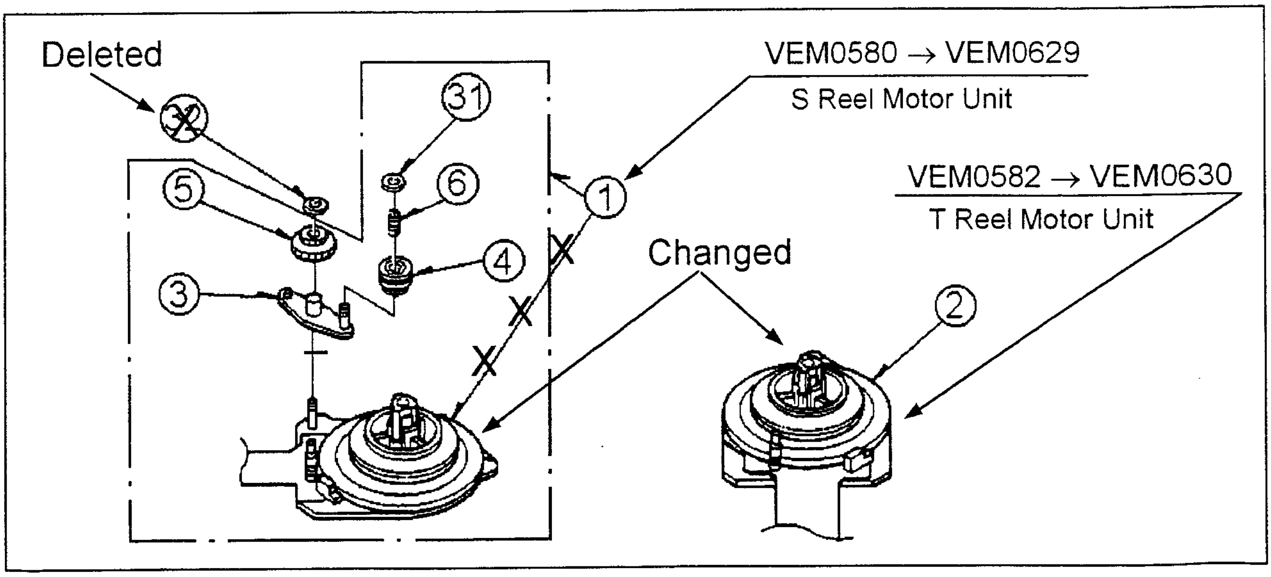
Mechanical Chassis Assembly (1)

Symptom : Reel Motor (Rotor portion) may take off from the Stator portion during transportation.

Remedy : To prevent it, the Rotor portion of Reel Motor and Idler Gear Unit are united with the Stator portion of Reel Motor as shown below.
According to this change, the 1-2.Cassette Height Position Pin Adjustment is not required.

**Part Number**

| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
|---|---|---|---|---|---|
| 1 | VEM0580 | VEM0629 | S REEL MOTOR U | 1 | |
| 2 | VEM0582 | VEM0630 | T REEL MOTOR U | 1 | |
| 3 | VXL2614 | — | IDLER GEAR | 1→0 | |
| 4 | VXP1700 | — | IDLER GEAR B U | 1→0 | |
| 5 | VDG1189 | — | IDLER GEAR A | 1→0 | |
| 6 | VMB3011 | — | IDLER SPRING | 1→0 | |
| 31 | VMX2391 | — | CUT WASHER | 1→0 | |
| 32 | VMX1061 | — | CUT WASHER | 1→0 | |



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✓ V19726 + V19925
V19696 + V20164

Order No. VSD9710SB650

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Improvement of Cleaning Solenoid Motion Sound

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 51 | VSD9606M501A/B | F7TKA0001 |
| AJ-D800E/EN | 2 | VSD9708M606A/B | F7TKA0001 |

Board : Servo (VEP02437B)

To decrease the motion sound of the Cleaning Solenoid, power supply voltage of the Cleaning Solenoid is changed from UNREG to 10.5V. The following modification is performed.

1). Resistor R749 (1/8W,0Ω) is deleted from the foil side.
2). Resistor R750 (1/8W,0Ω) is added to no mounted pattern of the foil side.

**Part Number**

| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
|---|---|---|---|---|---|
| R749 | ERJ8GEY0R00 | --- | M. RESISTOR CH 1/8W 0 | 1→0 | |
| R750 | --- | ERJ8GEY0R00 | M. RESISTOR CH 1/8W 0 | 0→1 | |

AJ-D700

| Ref. No. | Schematic Diagram | | P.C.Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| R749 | 2-53 | D-7 (7/9) | 3-11 | B-4 (F) |
| R750 | 2-53 | D-7 (7/9) | 3-11 | B-4 (F) |

AJ-D800

| Ref. No. | Schematic Diagram | | P.C.Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| R749 | SCM-59 | D-7 (7/9) | CBA-11 | B-4 (F) |
| R750 | SCM-59 | D-7 (7/9) | CBA-11 | B-4 (F) |

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✓ V9728 + V9729

Order No. VSD9710SB651

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Software Version Up Grade

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 52 | VSD9606M501A/B | F7TKA0001 |

Board : VTR System Control (VEP06A22B)

The following software has been up-dated to add the functioning of the VTR.

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| IC6006 | VSI2334C | VSI2334D | VTR SYSCON PROM Ver. 1.4 | 1 | |

< TEST MENU >

CAM SYSCON IC3502 : 1.2 A807
CAM SYSCON IC3505 : 1.2 D695
* VTR SYSCON IC6006 : 1.4 8EC0

*** Note ***

1). Regarding below method, please refer to the Technical Bulletin No. **VSD9610SB614**.
  a). When PROM is replaced, PROM Socket Cover must be replaced to new one at the same time as follows.
  b). When PROM is replaced, MENU setting is returned to factory setting. If the MENU setting is returned to user setting, MENU data is saved to IC CARD before replacement of PROM.

2). The hardware modification of the VTR Main Board must be required since the following software version. (CAM SYSCON/1.2, VTR SYSCON/1.3). When the software is up-graded this time, please confirm the P.C. Board. If the P.C. Board is not modified, the hardware modification must be performed. Please refer to the Technical Bulletin No. **VSD9705SB643**.

Symptom : When the two units (AJ-D700) are set to Time Code Slave Lock and GENLOCK and then go to REC mode, the REC mode is suddenly released.

Cause : When the Time Code Slave Lock and GENLOCK are set simultaneously, there may be a communication error between System Control and Servo.

Remedy : To prevent it, PROM IC6006 software version is up-graded from 1.3 to 1.4.

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V17728✓ V19646
V17729
V20161

Order No. VSD9710SB654

# Technical Bulletin

## Supplement to the Service Manual

**Broadcast Product**

## Subject : Improvement of Black Level in View Finder

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN V17728+V17729 | 56 | VSD9606M501A/B | H7TKA0001 |
| AJ-D800E/EN V19646+V20161 | 6 | VSD9708M606A/B | H7TKA0001 |

Board : EVF Video (VEP29022A)
H DEF (VEP29019A)

Symptom : Black level may be unstable in the View Finder.

Cause : Black level may fluctuate due to the signal APL change. As a result of it, it is not easy to adjust the Iris level.

Remedy : To be the black level stable, the following modification is performed.
After the modification as shown below, the following adjustments are required.
10-3. Sub Bright Adjustment
10-6. Size Adjustment
10-10. Focus Adjustment

< EVF Video >

1). Capacitor C9039 is changed from 50V/33pF to 50V/82pF on component the side as shown in figure 4.
2). Capacitor C9045 is changed from 50V/0.5pF to 50V/1pF on the foil side as shown in figure 5.
3). Capacitor C9046 is changed from 50V/82μF to 63V/68μF on the component side as shown in figure 4.
4). Resistor R9050 is changed from 1/16W,0Ω to 1/10W,1.5KΩ on the foil side as shown in figure 5.
5). Resistor R9051 is changed from 1/16W,220KΩ to 1/10W,120KΩ on the foil side as shown in figure 5.
6). Resistor R9052 is changed from 1/10W,91KΩ to 1/10W,100KΩ on the foil side as shown in figure 5.
7). Resistor R9056 is changed from 1/10W,1KΩ to 1/10W,680Ω on the component side as shown in figure 4.
8). Capacitor C9048 (16V/56μF) is deleted from the component side as shown in figures 1 and 4.
9). Diode D9006 (MA143) is deleted from the foil side as shown in figures 1 and 5.
10). Resistor R9070 (1/16W,0Ω) is deleted from the foil side as shown in figures 1 and 5.
11). Capacitor C9059 (25V/0.1μF) is added to the pattern on the foil side as shown in figures 1 and 5.
12). Capacitor C9060 (0.1μF) is added between minus (-) side of C9048 and TP9003 and fixed it with glue on the component side as shown in figures 1 and 2.
13). Transistor Q9022 (2SC4181) is added to the pattern on the foil side as shown in figures 1 and 5.
14). Resistor R9074 (1/10W,560Ω) is added to the pattern on the foil side as shown in figures 1 and 5.
15). Resistor R9097 (1/10W,2.2KΩ) is added to the pattern on the foil side as shown in figures 1 and 5.
16). Resistor R9098 (1/10W,9.1KΩ) is added to the pattern of R9096 on the foil side as shown in figures 1 and 3.
17). Resistor R9099 (1/4W,100KΩ) is added between minus (-) side of C9048 and base of Q9016 on the foil side as shown in figures 1 and 3.
18). Before installation of R9099, the insulation sheet is attached under R9099 and insulation tube is covered to C9048 side of R9099 on the foil side as shown in figure 3.

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| Part Number | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| C9039 | ECUX1H330JCV | ECUX1H820JCV | C. CAPACITOR CH 50V 82P | 1 | |
| C9045 | ECUX1H0R5CCV | ECUX1H010CCV | C. CAPACITOR CH 50V 1P | 1 | |
| C9046 | ECA1HFQ820 | ECA1JFQ680 | E. CAPACITOR 63V 68U | 1 | |
| C9048 | ECA1CKF560 | — | E. CAPACITOR 16V 56U | 1→0 | |
| C9059 | — | ECUX1E104ZFV | C. CAPACITOR CH 25V 0.1U | 0→1 | |
| C9060 | — | ECQV1104JM | P. CAPACITOR 0.1U | 0→1 | |
| D9006 | MA143 | — | DIODE | 1→0 | |
| Q9022 | — | 2SC4181 | TRANSISTOR | 0→1 | |
| R9050 | ERJ3GEY0R00 | ERJ6RBD152 | M. RESISTOR CH 1/10W 1.5K | 1 | |
| R9051 | ERJ3GEYG224 | ERJ6RED124 | M. RESISTOR CH 1/10W 120K | 1 | |
| R9052 | VRE0034E913 | ERJ6RBD104 | M. RESISTOR CH 1/10W 100K | 1 | |
| R9056 | VRE0034E102 | ERJ6RBD681 | M. RESISTOR CH 1/10W 680 | 1 | |
| R9070 | ERJ3GEY0R00 | — | M. RESISTOR CH 1/16W 0 | 1→0 | |
| R9074 | — | ERJ6RBD561 | M. RESISTOR CH 1/10W 560 | 0→1 | |
| R9097 | — | ERJ6RBD222 | M. RESISTOR CH 1/10W 2.2K | 0→1 | |
| R9098 | — | ERJ6RBD912 | M. RESISTOR CH 1/10W 9.1K | 0→1 | |
| R9099 | — | ER0S2CKG1003 | M. RESISTOR 1/4W 100K | 0→1 | |

| Ref. No. | Schematic Diagram | | P.C. Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| C9039 | 2-78 | G-6 | — | — |
| C9045 | 2-78 | H-9 | — | — |
| C9046 | 2-78 | F-11 | — | — |
| C9048 | 2-78 | I-10 | — | — |
| D9006 | 2-78 | I-9 | — | — |
| R9050 | 2-78 | H-6 | — | — |
| R9051 | 2-78 | I-6 | — | — |
| R9052 | 2-78 | J-6 | — | — |
| R9056 | 2-78 | G-7 | — | — |
| R9070 | 2-78 | J-10 | — | — |

< H DEF >

1). Capacitor C9104 is changed from 50V/82µF to 63V/68µF on the component side as shown in figure 6.
2). Resistor R9108 is changed from 1/10W,1MΩ to 1/10W,0Ω on the foil side as shown in figure 7
3). Resistor R9110 and R9111 are changed from 1/10W,1MΩ to 1/10W,470KΩ on the foil side as shown in figure 7.
4). Resistor R9113 is changed from 1/10W,1.5MΩ to 1/10W,470KΩ on the foil side as shown in figure 7.
5). Resistor R9114 is changed from 1/10W,1.5MΩ to 1/10W,680KΩ on the foil side as shown in figure 7.
6). Resistor R9115 is changed from 1/10W,220KΩ to 1/10W,820KΩ on the foil side as shown in figure 7.

| Part Number | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| C9104 | ECA1HFQ820 | ECA1JFQ680 | E. CAPACITOR 63V 68U | 1 | |
| R9108 | ERJ6GEYJ105 | ERJ6GEY0R00 | M. RESISTOR CH 1/10W 0 | 1 | |
| R9110, 11 | ERJ6GEYJ105 | ERJ6GEYJ474 | M. RESISTOR CH 1/10W 470K | 2 | |
| R9113 | ERJ6GEYJ155 | ERJ6GEYJ474 | M. RESISTOR CH 1/10W 470K | 1 | |
| R9114 | ERJ6GEYJ155 | ERJ6GEYJ684 | M. RESISTOR CH 1/10W 680K | 1 | |
| R9115 | ERJ6GEYJ224 | ERJ6GEYJ823 | M. RESISTOR CH 1/10W 82K | 1 | |

| Ref. No. | Schematic Diagram | | P.C. Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| C9104 | 2-77 | E-5 | — | — |
| R9108 | 2-77 | C-8 | — | — |
| R9110 | 2-77 | D-8 | — | — |
| R9111 | 2-77 | D-8 | — | — |
| R9113 | 2-77 | D-8 | — | — |
| R9114 | 2-77 | E-8 | — | — |
| R9115 | 2-77 | F-8 | — | — |

971053 65V

EVF Video Schematic Diagram

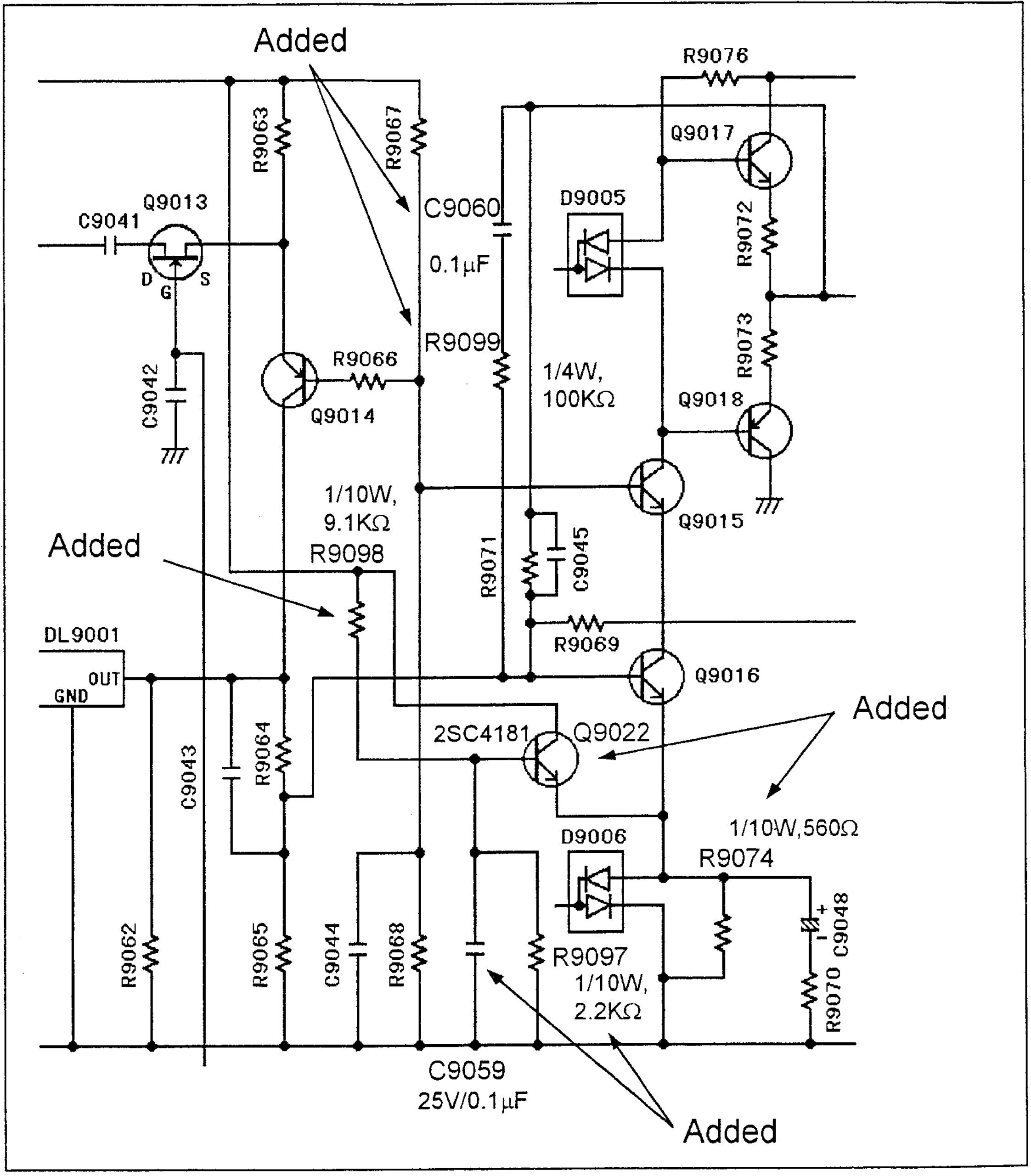
Added
R9076
R9063
R9067
Q9017
C9041
Q9013
D
G
S
C9060
0.1µF
D9005
R9072
R9099
1/4W,
100KΩ
R9073
C9042
R9066
Q9014
Q9018
Q9015
1/10W,
9.1KΩ
R9098
R9071
C9045
Added
R9069
DL9001
OUT
GND
Q9016
Added
2SC4181
Q9022
C9043
R9064
1/10W,560Ω
D9006
R9074
C9048
R9062
R9065
C9044
R9068
R9097
1/10W,
2.2KΩ
R9070
C9059
25V/0.1µF
Added

Fig. 1 Page 2-78

EVF Video P.C. Board (VEP29022A)

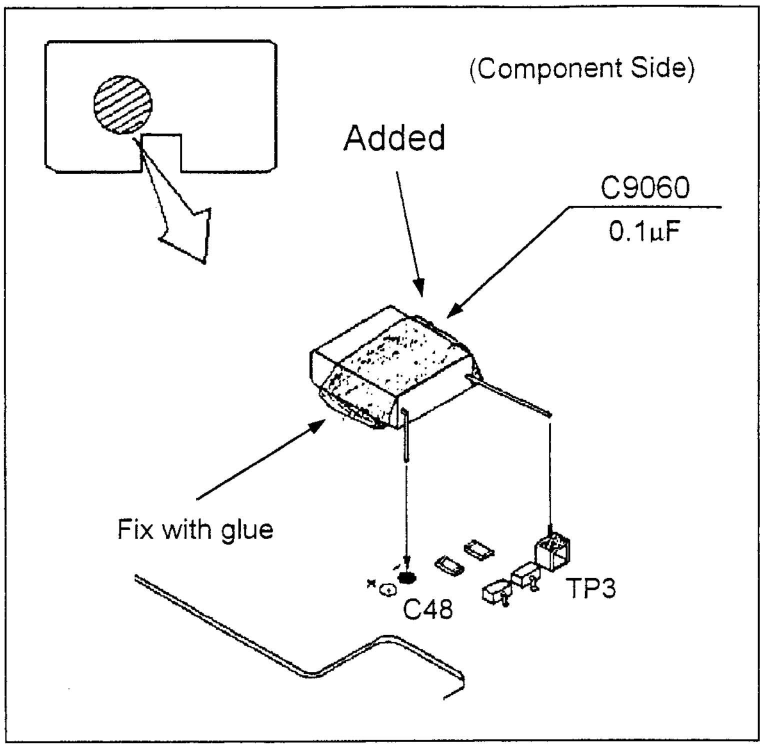
(Component Side)
Added
C9060
0.1µF
Fix with glue
C48
TP3

Fig. 2

EVF Video P.C. Board (VEP29022A)

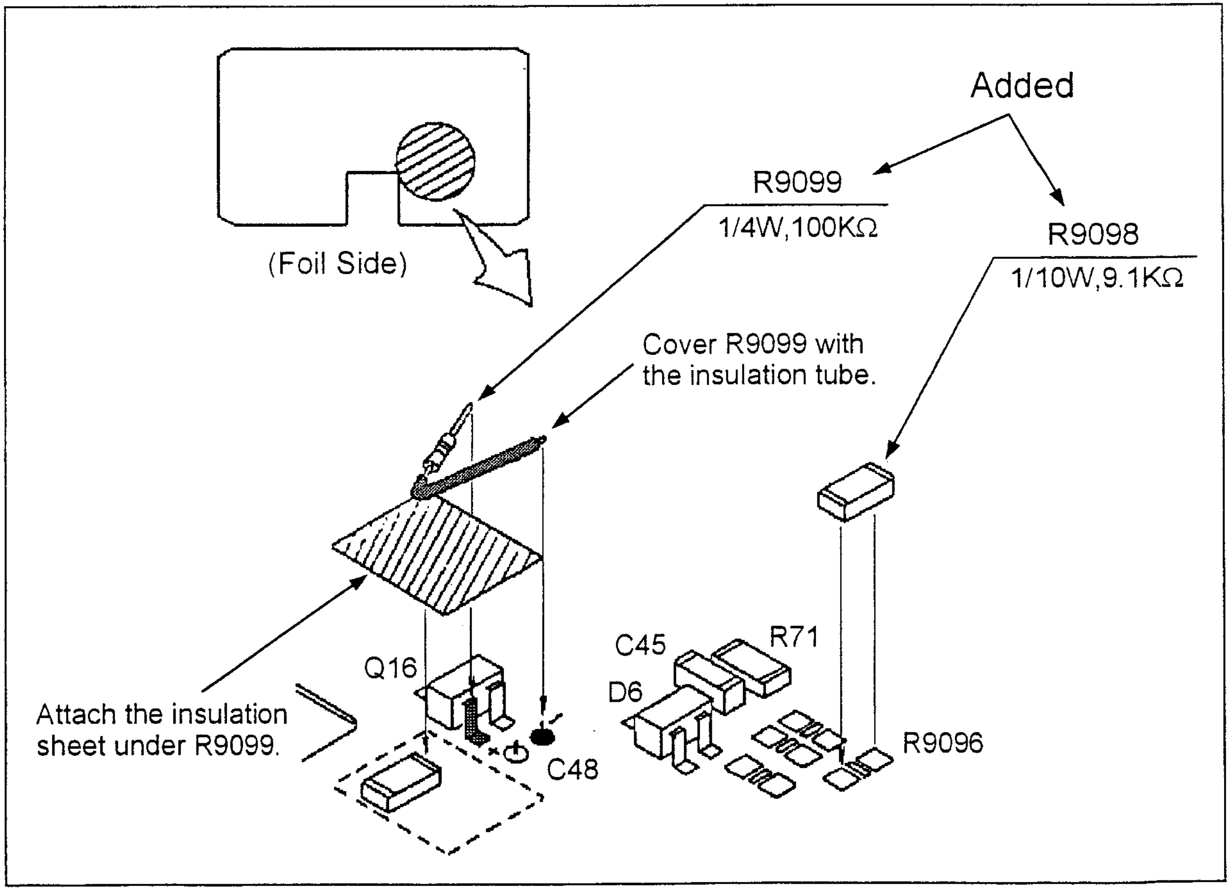
Added
R9099
1/4W,100KΩ
R9098
1/10W,9.1KΩ
(Foil Side)
Cover R9099 with the insulation tube.
Attach the insulation sheet under R9099.
Q16
C45
R71
D6
C48
R9096

Fig. 3

EVF Video P.C. Board (VEP29022A)

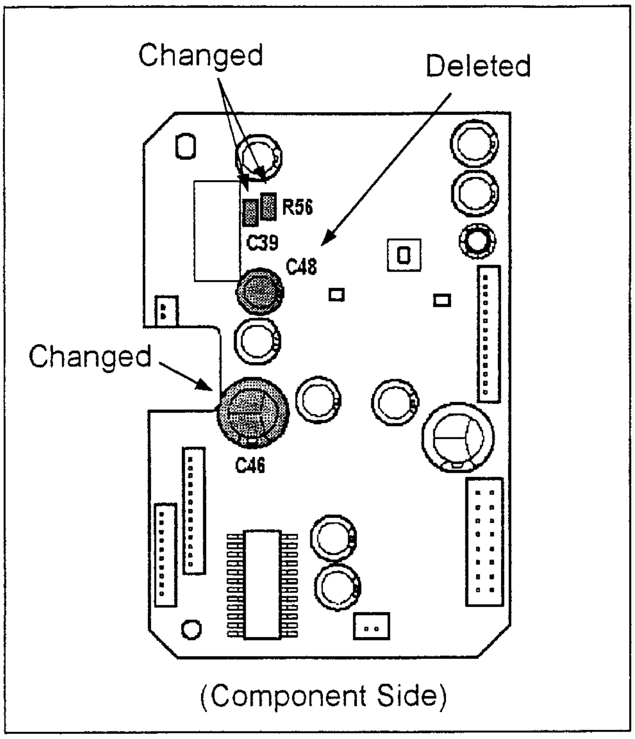
Changed
Deleted
R56
C39
C48
Changed
C46
(Component Side)

Fig. 4

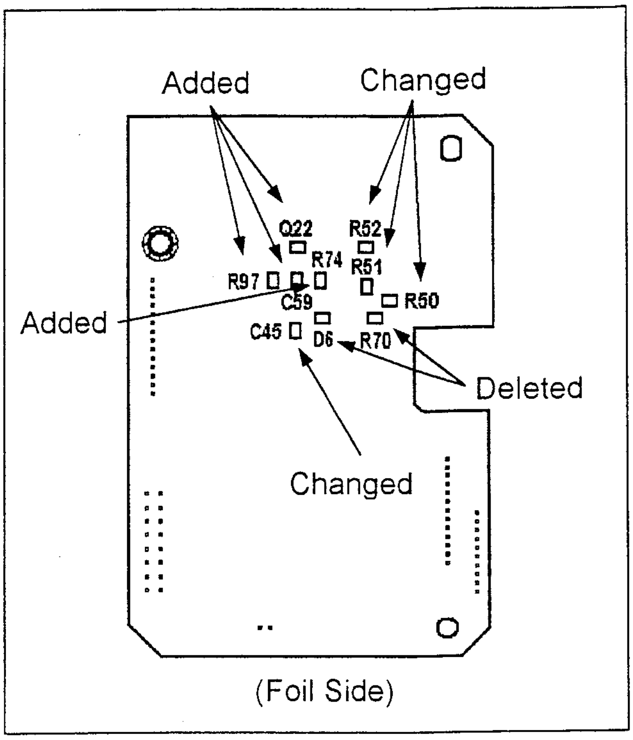
Added
Changed
Q22
R52
R74
R51
R97
C59
R50
Added
C45
D6
R70
Deleted
Changed
(Foil Side)

Fig. 5

H DEF P.C. Board (VEP29019A)

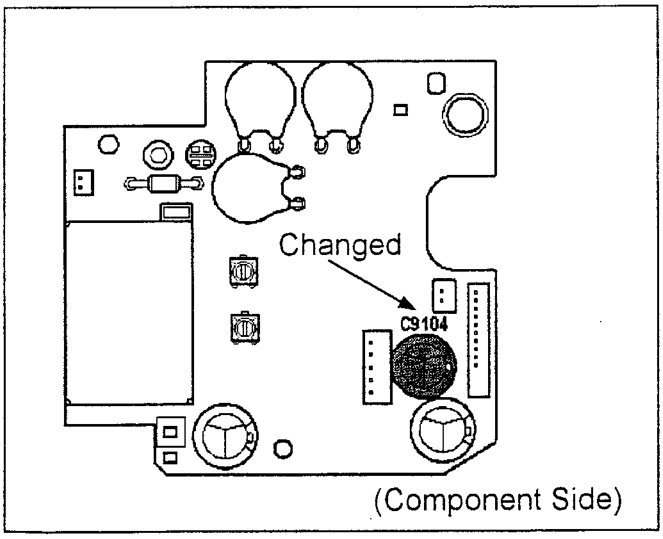
Changed
C9104
(Component Side)

Fig. 6

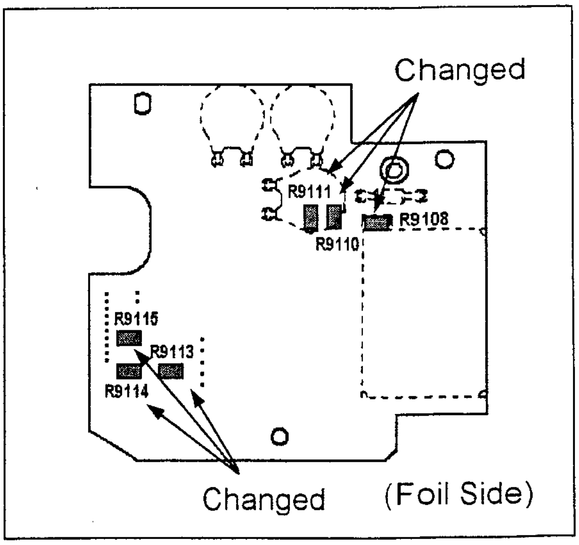
Changed
R9111
R9108
R9110
R9115
R9113
R9114
Changed
(Foil Side)

Fig. 7

Order No. VSD9710SB655

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Improvement of Analog Switch Terminal

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| ✓<br>AJ-D700E/EN V17728 + V17729 | 57 | VSD9606M501A/B | G7TKA0001 |
| AJ-D800E/EN V19646+V20161 | 7 | VSD9708M606A/B | G7TKA0001 |

Board : Camera System Control (VEP26074C) - AJ-D700
Camera System Control (VEP26074D) - AJ-D800

Symptom : D/A Converter may malfunction.

Cause : When the D/A Converter is not controlled, it may malfunction by the terminal connection of analog switch for D/A Converter control.

Remedy : To prevent it, the following modification is performed.

1). Resistor R3553 is deleted from the foil side.
2). Pins #1 and #5 of IC3520 are shorted on the foil side as shown in figures 1 and 2.
3). New resistors are covered with the tubes as shown in figures 2 and 3.
4). Resistor R3660 (1/4W,100KΩ) is installed between pins #8 and #12 of IC3520 on the foil side as shown in figures 1 and 2.
5). Resistor R3661 (1/4W,100KΩ) is installed between pins #12 and #16 of IC3521 on the foil side as shown in figures 1 and 3.
6). Resistor R3662 (1/4W,100KΩ) is installed between pins #12 and #16 of IC3522 on the foil side as shown in figures 1 and 3.
7). Resistor R3663 (1/4W,100KΩ) is installed between pins #12 and #16 of IC3523 on the foil side as shown in figures 1 and 3.

* Note * Install their bodies closely to ICs.

| Part Number | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| R3553 | ERJ3GEYJ473 | — | M. RESISTOR CH 1/16W 47K | 1→0 | |
| R3660 - 63 | — | ERDS2TJ104 | C. RESISTOR 1/4W 100K | 0→4 | |

AJ-D700

| Ref. No. | Schematic Diagram | | P.C.Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| R3553 | 2-16 | G-8 (2/5) | 3-5 | B-1 (F) |

AJ-D800

| Ref. No. | Schematic Diagram | | P.C.Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| R3553 | SCM-17 | B-7 (2/5) | CBA-5 | B-1 (F) |

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Camera System Control (2/5) Schematic Diagram

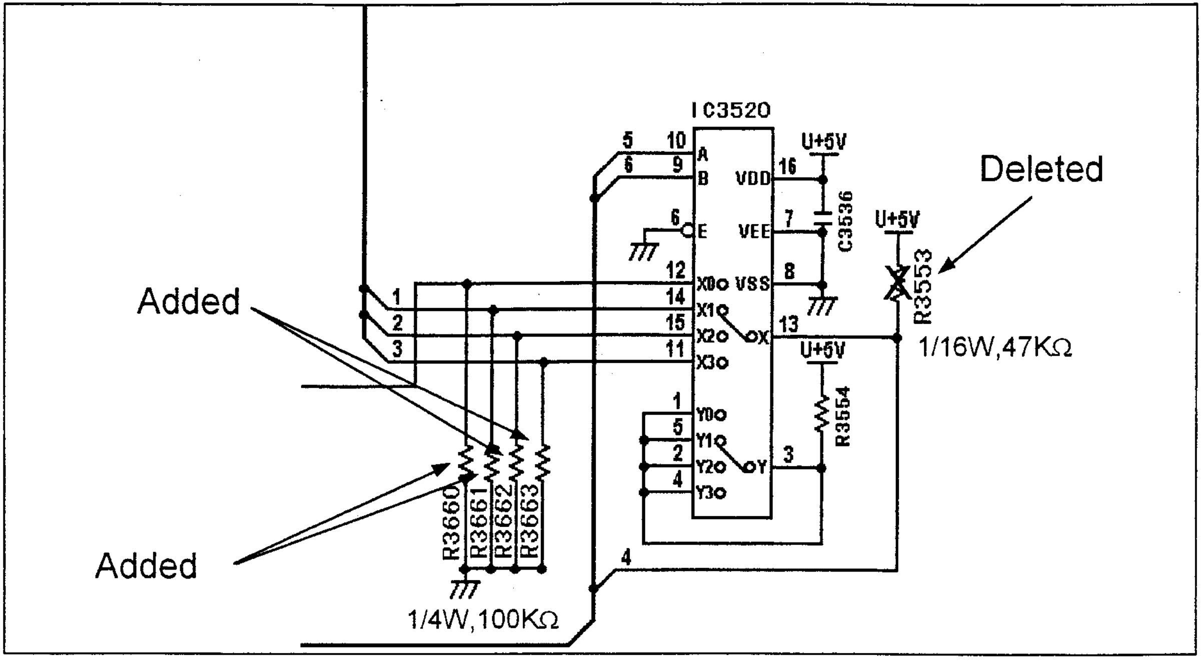
IC3520
Deleted
Added
Added
U+5V
VDD
VEE
VSS
C3536
R3553
1/16W,47KΩ
R3554
R3660
R3661
R3662
R3663
1/4W,100KΩ
A
B
E
X0
X1
X2
X3
X
Y0
Y1
Y2
Y3
Y

Fig. 1 Page 2-16 (G-7) / Page SCM-17 (A-6)

Camera System Control P.C. Board (VEP26074C/D)

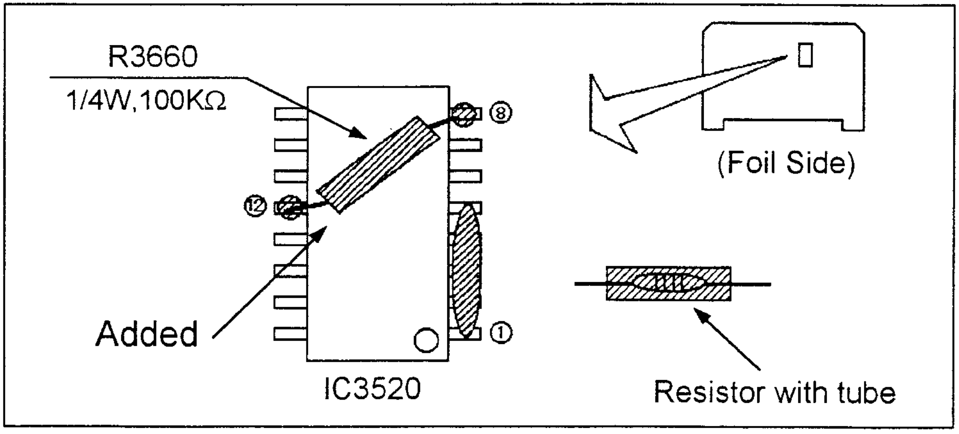
R3660
1/4W,100KΩ
⑧
⑫
①
Added
IC3520
(Foil Side)
Resistor with tube

Fig. 2 Page 3-5 (B-1) / CBA-5 (B-1)

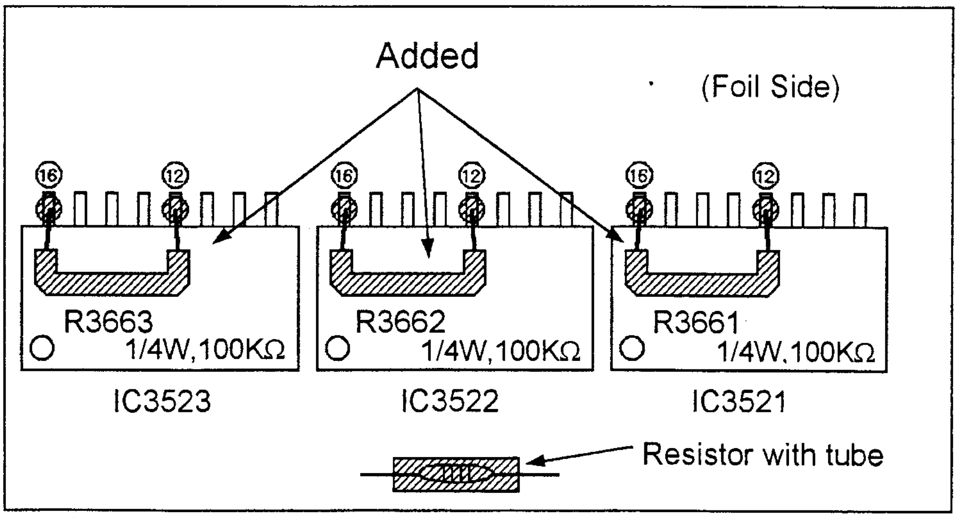
Added
(Foil Side)
⑯
⑫
R3663
1/4W,100KΩ
IC3523
R3662
1/4W,100KΩ
IC3522
R3661
1/4W,100KΩ
IC3521
Resistor with tube

Fig. 3 Page 3-5 (B~C-1) / CBA-5 (B~C-1)

✓ V17728 + V17729
V18646 + V20161

Order No. VSD9710SB656

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Change of Screws

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 59 | VSD9606M501A/B | G7TKA0001 |
| AJ-D800E/EN | 9 | VSD9708M606A/B | G7TKA0001 |

Board : Video I/F (VEP03D53A)
VTR System Control (VEP06A22B) - AJ-D700
VTR System Control (VEP06A22C) - AJ-D800
Camera ENC (VEP23276B)
Camera SYNC (VEP23277B) - AJ-D700
Camera SYNC (VEP23446B) - AJ-D800
Camera System Control (VEP26074C)
Camera System Control (VEP26074D)

When the Shield Plate is fixed with the screws, the Shield Plate may be deformed. To prevent it, the screws are changed from XSN2+6 to XSB2+6.

Video I/F Board (VEP03D53A)

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| | XSN2+6 | XSB2+6 | SCREW | 3 | |

VTR System Control Board (VEP06A22B/C)

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| | XSN2+6 | XSB2+6 | SCREW | 2 | |

Camera ENC Board (VEP23276B)

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| | XSN2+6 | XSB2+6 | SCREW | 2 | |

Camera SYNC Board (VEP23277B/VEP23446B)

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| | XSN2+6 | XSB2+6 | SCREW | 2 | |

Camera System Control Board (VEP26074C/D)

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| | XSN2+6 | XSB2+6 | SCREW | 2 | |

TE4859

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V17728 ✓
V17729

Order No. VSD9710SB660

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Reduction of Audio Input Line Noise after Power ON

| Please use this supplement together with the Service Manual as follows : | | | |
|---|---|---|---|
| Model No. | Bulletin No. | Order No. | Effective from |
| AJ-D700E/EN | 63 | VSD9606M501A/B | H7TKA0001 |

Board : Audio LCD (VEP04522B)

Symptom : Audio noise may appear at the Audio Input Line and the meter of the Mixer may swing fully when the Camera Power Supply is turned ON connected with the Mixer at the Rear Audio Input.

Cause : +48V for Phantom MIC is output momentarily and it results in Audio Input Line noise.

Remedy : To reduce the Audio Input Line noise, the following modification is performed.

1). Capacitor C4171 (16V/0.1μF) is put on the resistor R4318 and then soldered them on the foil side as shown in figures 1 and 2.

2). Capacitor C4271 (16V/0.1μF) is put on the resistor R4418 and then soldered them on the foil side as shown in figures 1 and 2.

**Part Number**

| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
|---|---|---|---|---|---|
| C4171 | — | ECUX1C104KBV | C. CAPACITOR CH 16V 0.1U | 0→1 | |
| C4271 | — | ECUX1C104KBV | C. CAPACITOR CH 16V 0.1U | 0→1 | |

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Audio LCD (1/9) Schematic Diagram

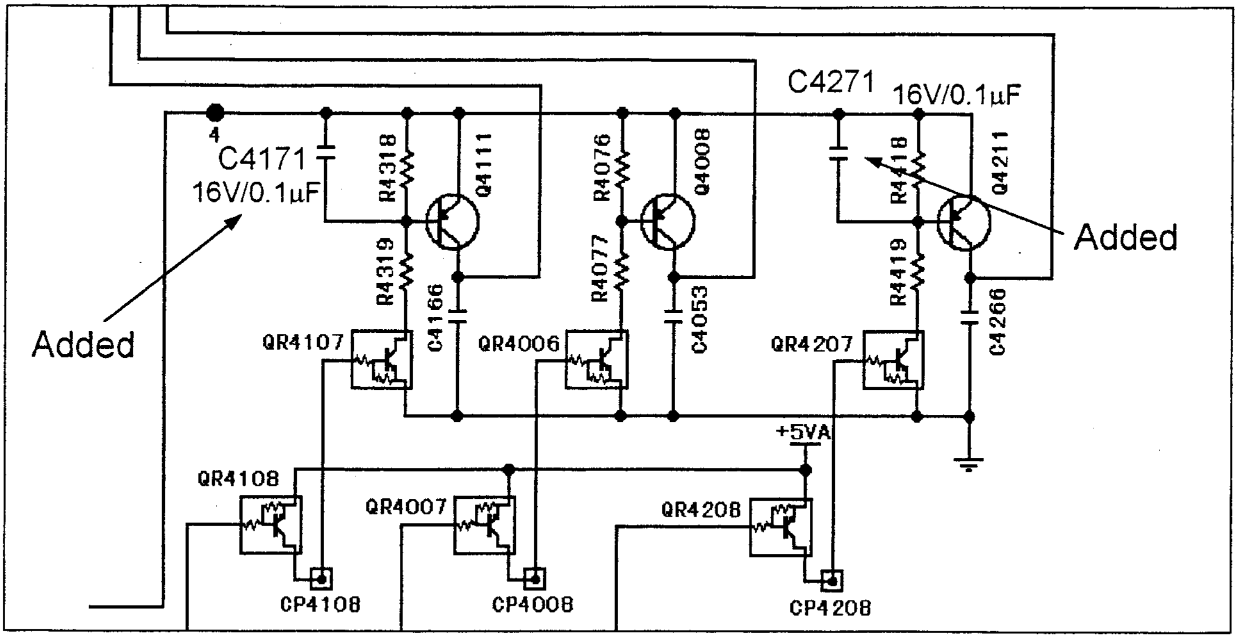
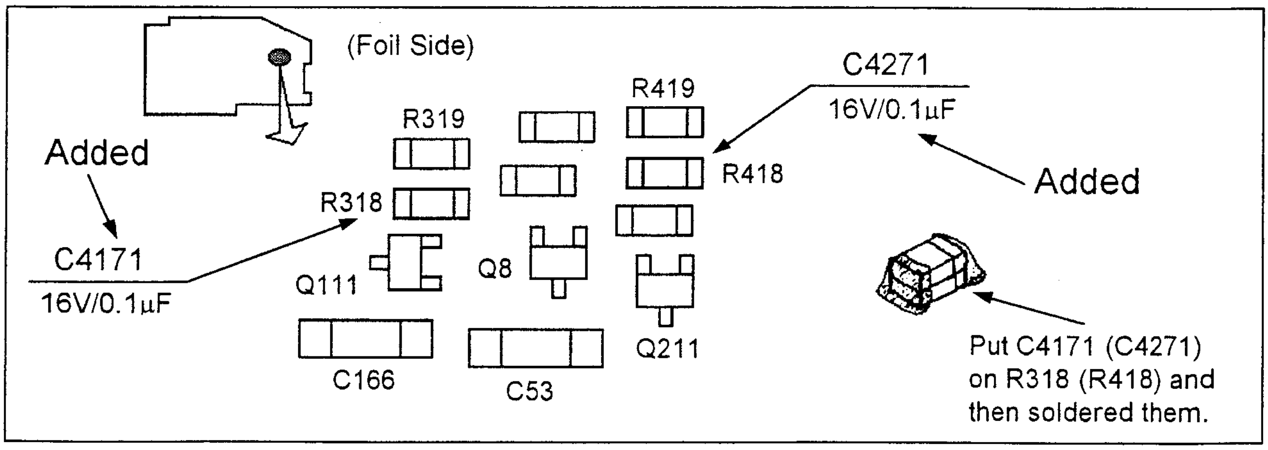

C4271
16V/0.1µF
4
C4171
16V/0.1µF
R4318
Q4111
R4076
Q4008
R4418
Q4211
Added
Added
R4319
R4077
R4419
C4166
C4053
C4266
QR4107
QR4006
QR4207
+5VA
QR4108
QR4007
QR4208
CP4108
CP4008
CP4208

Fig. 1 Page 2-70 (G-3~4)

Audio LCD P.C. Board (VEP04522B)


(Foil Side)
C4271
16V/0.1µF
R419
R319
Added
R418
Added
R318
C4171
16V/0.1µF
Q111
Q8
Q211
C166
C53

Put C4171 (C4271) on R318 (R418) and then soldered them.

Fig. 2 Page 3-17 (B-2)

√ [illegible]

Order No. VSD9711SB662

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Software Version Up Grades

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 66 | VSD9606M501A/B | I7TKA0001 |

Board : Camera System Control (VEP26074C)
VTR System Control (VEP06A22B)

The following software has been up-dated to add the functioning of the VTR.

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| IC3502 | VSI2241B | VSI2241C | CAM SYSCON PROM Ver. 1.3 | 1 | |
| IC3505 | VSI2242B | VSI2242C | CAM SYSCON PROM Ver. 1.3 | 1 | |
| IC6006 | VSI2334D | VSI2334E | VTR SYSCON PROM Ver. 1.5 | 1 | |

< TEST MENU >

* CAM SYSCON IC3502 : 1.3 912D
* CAM SYSCON IC3505 : 1.3 ECC4
* VTR SYSCON IC6006 : 1.5 5BC5

*** Note ***

1). Regarding below method, please refer to the Technical Bulletin No. **VSD9610SB614**.
  a). When PROM is replaced, PROM Socket Cover must be replaced to new one at the same time as follows.
  b). When PROM is replaced, MENU setting is returned to factory setting. If the MENU setting is returned to user setting, MENU data is saved to IC CARD before replacement of PROM.

2). The hardware modification of the VTR Main Board must be required since the following software version. (CAM SYSCON/1.2, VTR SYSCON/1.3). When the software is up-graded this time, please confirm the P.C. Board. If the P.C. Board is not modified, the hardware modification must be performed. Please refer to the Technical Bulletin No. **VSD9705SB643**.

**< Additional Function >**

1. < FUNCTION 2/5 Screen >

1. S.IRIS SW
   - 1-1. S.IRIS SW OFF can be available. When S.IRIS SW is pressed, S.IRIS/30dB/OFF can be selected.
   - 1-2. When the mode sets to OFF, S.IRIS SW is ignored in spite of pressing.
   - 1-3. When the GAIN SW (L/M/H) is switched, the unit accepts the GAIN SW mode in spite of FORCE 30dB mode (Menu 30dB/S. IRIS SW ON).

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2. Synchro Scan Select function is changed.
When the S.SCAN mode of Function Menu 2/5 is ON, VF DISPLAY of Option Menu is SPECIAL and S.SCAN SW of Front is ON pressing the MODE CHECK SW, the status of the MODE CHECK is still displayed. It is improved. When the status of the MODE CHECK is displayed although the MODE CHECK SW is OFF, it is not displayed.

```
        - FUNCTION 2/5 -

→SUPER V            : FRM 1
 FILTER INH         : OFF
 SHOCKLESS AWB      : NORMAL
 S.IRIS SW          : S.IRIS
 S. SCAN SEL        : ON  ⇦   Changed
                                from OFF
```

| Item | Variable Range | VF Display | Remarks |
|---|---|---|---|
| S. IRIS SW | S.IRIS<br>30dB<br>OFF | ENG | Super iris (S.IRIS) / 30 dB / OFF switching |
| S.SCAN SEL | ON<br>OFF | ENG | Synchro scan ON/OFF switching<br>ON : S.SCAN speed can be varied by the SUPER IRIS/MODE CHECK switch.<br>OFF : Normal mode |

2. < SET UP CARD Screen >

1. The following Camera Menu data READ/WRITE ON/OFF select function is introduced.

```
        - SET UP CARD -

→READ (→CAM)
 WRITE (→CARD)
 CARD CONFIG.
 ID READ / WRITE    :  ON
 FUNCTION 1 - 2 R/W :  ON  ⇦  Added
 L/M/H SET R/W      :  ON  ⇦  Added
 LEVEL 1 - 6 R/W    :  ON  ⇦  Added
```

| Item | Variable Range | VF Display | Remarks |
|---|---|---|---|
| FUNC 1~2 R/W | ON<br>OFF | USER<br>ENG | READ/WRITE for FUNCTION1 and FUNCTION2 is switched ON or OFF when data is read from or written on the SET UP CARD.<br>ON : READ/WRITE is enabled.<br>OFF : READ/WRITE is disabled. |
| L/M/H SET R/W | ON<br>OFF | USER<br>ENG | READ/WRITE for LOW SETTING, MID SETTING and HIGH SETTING is switched ON or OFF when data is read from or written on the SET UP CARD.<br>ON : READ/WRITE is enabled.<br>OFF : READ/WRITE is disabled. |
| LEVEL 1~6 R/W | ON<br>OFF | USER<br>ENG | READ/WRITE for LEVEL 1/6, 2/6, 3/6, 4/6, 5/6 and 6/6 is switched ON or OFF when data is read from or written on the SET UP CARD.<br>ON : READ/WRITE is enabled.<br>OFF : READ/WRITE is disabled. |

3. AWB NG Warning Function

1. When the AWB SW is turned ON (START) while AWB is NG, the following Warning Display is indicated.
   * Note * When the AWB is changed from NG position to regular position (FLT 1/2/3/4), this Warning Display is turned OFF.

```
AWB NG
CHECK FILTER
```

## 4. < OPTION Menu>

*** This Menu is only Engineer Security purpose, so it is not written on the Operating Instructions.**

This Menu is opened as following Setting.
Set the Menu SW pushing [SHIFT/ITEM] key and [PAGE SW] key simultaneously.

```
          - OPTION MENU -

  →ENG SECURITY   : OFF
   TONE MODE      : NORMAL
   METER SELECT   : CH1
   VF DISPLAY     : NORMAL
   TC OUT         : TCG
   TCG SET        : RESET
   BATT WARNING   : ON
```

⇧ Added

| Item | Variable Range | VF Display | Remarks |
|---|---|---|---|
| VF DISPLAY | NORMAL<br>SPECIAL | ENG | NORMAL : Status which selected by the Menu is displayed in the View Finder.<br>SPECIAL : Status which selected by the Menu is displayed in the View Finder only when the MODE CHECK SW is pressed. |
| TC OUT | TCG<br>TCG/TCR | ENG | TCG : TCG is only output.<br>TCG/TCR : TCR is output during V-V mode. TCG is output during E-E mode.<br>*** Note * When the TCR is output as it is, it is output adding two frames because it is two frames delay than picture.** |
| TCG SET | RESET<br>HOLD | ENG | RESET : REGEN is performed when the unit goes to REC mode after power is turned from OFF to ON in spite of TCG setting.<br>HOLD : REGEN is not performed when the unit goes to REC mode after power is turned from OFF to ON with TCG setting |
| BATT WARNING | ON<br>OFF | ENG | ON : When the ALARM, TALLY LED is ON during TAPE NEAR END mode, they are ON as it is.<br>OFF : When the ALARM, TALLY LED is ON during TAPE NEAR END mode, they are OFF by MODE CHECK SW is ON. |

1. VF DISPLAY NORMAL/SPECIAL select function is introduced.
   Status display in the View Finder is only displayed when the MODE CHECK SW is pressed.
2. TCG/TCR Output function from TC OUT of the Rear Side Panel is introduced.
3. TCG RESET/HOLD select function is introduced.
   When the unit goes to REC mode after the power is turned from OFF to ON with TCG setting, the REGEN is performed in spite of TCG setting. To prevent it, this function is added.
4. Battery Warning ON/OFF select function is introduced.
   When the ALARM and TALLY END are ON during TAPE NEAR END mode, they can be turned OFF by the MODE CHECK SW is ON.

## < Improvement of Performance >

1. < LEVEL 3/6 Screen >

1. Variable range of WHITE CLIP LEVEL is changed from “238 ~ 254” to “214 ~ 254”.

```
         - LEVEL 3/6 -

→M. PED            : +006
 MANUAL KNEE       : ON
 KNEE POINT        : 197
 KNEE SLOPE        : 24    ⇦  Changed
 WHITE CLIP        : ON        from 12
 WHITE CLIP LEVEL : 244    ⇦  Changed
                               from 254
```

| Item | Variable Range | VF Display | Remarks |
|---|---|---|---|
| KNEE SLOPE | 0<br>:<br>**24**<br>25 | ENG | Manual knee inclination setting. |
| WHITE CLIP LEVEL | **214**<br>:<br>**244**<br>:<br>254 | ENG | White clip level setting. |

2. < LEVEL 5/6 Screen >

1. Variable range of MATRIX is changed from “-25 ~ +25” to “-31 ~ +31”.

3. < LEVEL 6/6 Screen >

1. Normal 2 mode on the A. IRIS MODE is introduced.

```
          - LEVEL 6/6 -

→H PHASE COARSE    : 07
 H PHASE FINE      : 128
 SC PHASE COARSE : 0
 SC PHASE FINE     : 128
 A.IRIS LEVEL       : 063
 A.IRIS PEAK / AVE  : 075
 A.IRIS MODE        : NORM1   ⇦  Added
 S.IRIS LEVEL      : 072
```

| Item | Variable Range | VF Display | Remarks |
|---|---|---|---|
| A. IRIS MODE | NORM1<br>NORM2<br>CENTR | ENG | Audio iris mode selection<br>NORM1 : Light metering over entire screen (except for edges).<br>**NORM2 : Light metering over entire screen (except for top).**<br>CENTR : Light metering which is focused solely on the screen center. The iris value which matches the subject is set for this mode even when the brightness of the subject at the center differs from that at the screen edges. |

4. VF TAPE REMAIN Display Change
When the tape remaining is more than 30 minutes, it can be displayed till 60 minutes in the View Finder as follows.

| | |
|---|---|
| Current Display | F-30, 30-25, ,,,,,, 5-0 |
| New Display | F-60, 60-55, ,,,,,, 5-0 |

* Note * TAPE REMAIN on the Front LCD is not changed. When the tape remaining is more than 30 minutes, it displays “FULL”.

5. VF IRIS Display Change
As the IRIS Display in the View Finder falls on the one character of the Audio Level Meter, it is changed as follows.

| | |
|---|---|
| Number of Character | 5 numbers of character → **4 numbers of character** |
| Character Change | “CLOSE” → “**_ _ _ C**” (Because only CLOSE is 5 numbers of characters) |

6. Improvement of TC DF/NDF Mode Change
   When TC MODE on the Menu is selected "DF" and then LCD Display on the Front Panel indicates CTL or UB, the unit goes to NDF mode. It is improved.

7. Improvement of PHANTOM MIC Power ON/OFF
   When the AUDIO IN SW (CH1/CH2) on the Front Panel is set to LINE, the PHANTOM MIC power is still turned ON. To prevent it, when the AUDIO IN SW (CH1/CH2) on the Front Panel is set to LINE, the PHANTOM MIC power is turned OFF.

8. ANTON BATT (DIGITAL) Voltage Detect Level Change
   The time until UNDER CUT functions is too long after the BATT NEAR END WARNING of the ANTON BATT (DIGITAL) is displayed. It is improved.

9. Improvement of Filter Display
   When the Optical filter is NG position, FLT4 is displayed. It is improved.

17728 ✓
17729

Order No. VSD9711SB662-1

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Software Version Up Grades

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 66A | VSD9606M501A/B | I7TKA0001 |

Board : Camera System Control (VEP26074C)
VTR System Control (VEP06A22B)

The following software has been up-dated to add the functioning of the VTR.

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| IC3502 | VSI2241B | VSI2241C | CAM SYSCON PROM Ver. 1.3 | 1 | |
| IC3505 | VSI2242B | VSI2242C | CAM SYSCON PROM Ver. 1.3 | 1 | |
| IC6006 | VSI2334D | VSI2334E | VTR SYSCON PROM Ver. 1.5 | 1 | |

< TEST MENU >

* CAM SYSCON IC3502 : 1.3 912D
* CAM SYSCON IC3505 : 1.3 ECC4
* VTR SYSCON IC6006 : 1.5 5BC5

**This is the revision of the Technical Bulletin No. VSD9711SB662. Please substitute new Technical Bulletin No. VSD9711SB662-1 for the old one. (VSD9711SB662)**

*** Notes * (Bold letters in the notes are changed portions of this revised Technical Bulletin)**

1). Regarding below method, please refer to the Technical Bulletin No. **VSD9608SB614-1**.
  a). When PROM is replaced, PROM Socket Cover must be replaced to new one at the same time.
  **b). When PROM is replaced, MENU setting is returned to factory setting. If the MENU setting is returned to user setting, MENU data is saved to IC CARD before replacement of PROM.**

2). The hardware modification of the VTR Main Board must be required since the following software version. (CAM SYSCON/1.2, VTR SYSCON/1.3). Please refer to the Technical Bulletin No. **VSD9705SB643-2**.
  a). When the software is up-graded this time, please confirm the P.C. Board. If the P.C. Board is not modified, the hardware modification must be performed.
  **b). New pattern layout of the VTR Main Board (VJB03B96-3/VEP03B96B-7) was introduced from July 1997 production. When the software is up-graded, confirm the P.C. Board version of the VTR Main Board. If the P.C. Board version is more than VJB03B96-3/VEP03B96B-7, hardware modification is not required.**

**3). Auto Iris characteristics is changed with these software version up-grades. According to these changes, the initial setting of A. IRIS and S. IRIS are different between old software version and new one. When the software is up-graded and then load the user setting which saved the IC card before replacement of PROM, camera picture may become dark. So, A. IRIS and S. IRIS levels are set to new level as shown below.**

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## < Additional Function >

### 1. < FUNCTION 2/5 Screen >

1. S.IRIS SW
   1-1. S.IRIS SW OFF can be available.
   When S.IRIS SW is pressed, S.IRIS/30dB/OFF can be selected.
   1-2. When the mode sets to OFF, S.IRIS SW is ignored in spite of pressing.
   1-3. When the GAIN SW (L/M/H) is switched, the unit accepts the GAIN SW mode in spite of FORCE 30dB mode (Menu 30dB/S. IRIS SW ON).

2. Synchro Scan Select function is changed.
   When the S.SCAN mode of Function Menu 2/5 is ON, VF DISPLAY of Option Menu is SPECIAL and S.SCAN SW of Front is ON pressing the MODE CHECK SW, the status of the MODE CHECK is still displayed. It is improved. When the status of the MODE CHECK is displayed although the MODE CHECK SW is OFF, it is not displayed.

```
        - FUNCTION 2/5 -

→SUPER V             : FRM 1
 FILTER INH          : OFF
 SHOCKLESS AWB       : NORMAL
 S.IRIS SW           : S.IRIS
 S. SCAN SEL          : ON   ⇦  Changed
                                from OFF
```

| Item | Variable Range | VF Display | Remarks |
|---|---|---|---|
| S. IRIS SW | S.IRIS<br>30dB<br>**OFF** | ENG | Super iris (S.IRIS) / 30 dB / OFF switching |
| S.SCAN SEL | ON<br>**OFF** | ENG | Synchro scan ON/OFF switching<br>ON : S.SCAN speed can be varied by the SUPER IRIS/MODE CHECK switch.<br>OFF : Normal mode |

### 2. < SET UP CARD Screen >

1. The following Camera Menu data READ/WRITE ON/OFF select function is introduced.

```
        - SET UP CARD -

→READ (→CAM)
 WRITE (→CARD)
 CARD CONFIG.
 ID READ / WRITE     :  ON
 FUNCTION 1 - 2 R/W :  ON  ⇦  Added
 L/M/H SET R/W      :  ON  ⇦  Added
 LEVEL 1 - 6 R/W    :  ON  ⇦  Added
```

| Item | Variable Range | VF Display | Remarks |
|---|---|---|---|
| FUNC 1~2 R/W | ON<br>OFF | USER<br>ENG | READ/WRITE for FUNCTION1 and FUNCTION2 is switched ON or OFF when data is read from or written on the SET UP CARD.<br>ON : READ/WRITE is enabled.<br>OFF : READ/WRITE is disabled. |
| L/M/H SET R/W | ON<br>OFF | USER<br>ENG | READ/WRITE for LOW SETTING, MID SETTING and HIGH SETTING is switched ON or OFF when data is read from or written on the SET UP CARD.<br>ON : READ/WRITE is enabled.<br>OFF : READ/WRITE is disabled. |
| LEVEL 1~6 R/W | ON<br>OFF | USER<br>ENG | READ/WRITE for LEVEL 1/6, 2/6, 3/6, 4/6, 5/6 and 6/6 is switched ON or OFF when data is read from or written on the SET UP CARD.<br>ON : READ/WRITE is enabled.<br>OFF : READ/WRITE is disabled. |

### 3. AWB NG Warning Function

1. When the AWB SW is turned ON (START) while AWB is NG, the following Warning Display is indicated.
   * Note * When the AWB is changed from NG position to regular position (FLT 1/2/3/4), this Warning Display is turned OFF.

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AWB NG
CHECK FILTER

4. < OPTION Menu>

*** This Menu is only Engineer Security purpose, so it is not written on the Operating Instructions.**

This Menu is opened as following Setting.
Set the Menu SW pushing [SHIFT/ITEM] key and [PAGE SW] key simultaneously.

**- OPTION MENU -**

→ENG SECURITY : OFF
TONE MODE : NORMAL
METER SELECT : CH1
**VF DISPLAY : NORMAL**
**TC OUT : TCG**
**TCG SET : RESET**
**BATT WARNING : ON**

⇧ Added

| Item | Variable Range | VF Display | Remarks |
|---|---|---|---|
| VF DISPLAY | NORMAL<br>SPECIAL | ENG | NORMAL : Status which selected by the Menu is displayed in the View Finder.<br>SPECIAL : Status which selected by the Menu is displayed in the View Finder only when the MODE CHECK SW is pressed. |
| TC OUT | TCG<br>TCG/TCR | ENG | TCG : TCG is only output.<br>TCG/TCR : TCR is output during V-V mode. TCG is output during E-E mode.<br>*** Note * When the TCR is output as it is, it is output adding two frames because it is two frames delay than picture.** |
| TCG SET | RESET<br>HOLD | ENG | RESET : REGEN is performed when the unit goes to REC mode after power is turned from OFF to ON in spite of TCG setting.<br>HOLD : REGEN is not performed when the unit goes to REC mode after power is turned from OFF to ON with TCG setting |
| BATT WARNING | ON<br>OFF | ENG | ON : When the ALARM, TALLY LED is ON during TAPE NEAR END mode, they are ON as it is.<br>OFF : When the ALARM, TALLY LED is ON during TAPE NEAR END mode, they are OFF by MODE CHECK SW is ON. |

1. VF DISPLAY NORMAL/SPECIAL select function is introduced.
   Status display in the View Finder is only displayed when the MODE CHECK SW is pressed.
2. TCG/TCR Output function from TC OUT of the Rear Side Panel is introduced.

3. TCG RESET/HOLD select function is introduced.
   When the unit goes to REC mode after the power is turned from OFF to ON with TCG setting, the REGEN is performed in spite of TCG setting. To prevent it, this function is added.
4. Battery Warning ON/OFF select function is introduced.
   When the ALARM and TALLY END are ON during TAPE NEAR END mode, they can be turned OFF by the MODE CHECK SW is ON.

**< Improvement of Performance >**

1. < LEVEL 3/6 Screen >

   Variable range of WHITE CLIP LEVEL is changed from "238 ~ 254" to "214 ~ 254".

```
         - LEVEL 3/6 -

→M. PED              : +006
 MANUAL KNEE          : ON
 KNEE POINT           : 197
 KNEE SLOPE           : 24     ⇦  Changed from 12
 WHITE CLIP           : ON
 WHITE CLIP LEVEL     : 244    ⇦  Changed from 254
```

| Item | Variable Range | VF Display | Remarks |
|---|---|---|---|
| KNEE SLOPE | 0<br>:<br>**24**<br>25 | ENG | Manual knee inclination setting. |
| WHITE CLIP LEVEL | **214**<br>:<br>**244**<br>:<br>254 | ENG | White clip level setting. |

2. < LEVEL 5/6 Screen >

   Variable range of MATRIX is changed from "-25 ~ +25" to "-31 ~ +31".

3. VF TAPE REMAIN Display Change
   When the tape remaining is more than 30 minutes, it can be displayed till 60 minutes in the View Finder as follows.

| | |
|---|---|
| Current Display | F-30, 30-25, ,,,,,, 5-0 |
| New Display | F-60, 60-55, ,,,,,, 5-0 |

   * Note * TAPE REMAIN on the Front LCD is not changed. When the tape remaining is more than 30 minutes, it displays "FULL".

4. VF IRIS Display Change
   As the IRIS Display in the View Finder falls on the one character of the Audio Level Meter, it is changed as follows.

| | |
|---|---|
| Number of Character | 5 numbers of character → **4 numbers of character** |
| Character Change | "CLOSE" → **"_ _ _ C"** (Because only CLOSE is 5 numbers of characters) |

5. Improvement of TC DF/NDF Mode Change
   When TC MODE on the Menu is selected "DF" and then LCD Display on the Front Panel indicates CTL or UB, the unit goes to NDF mode. It is improved.

6. Improvement of PHANTOM MIC Power ON/OFF
   When the AUDIO IN SW (CH1/CH2) on the Front Panel is set to LINE, the PHANTOM MIC power is still turned ON. To prevent it, when the AUDIO IN SW (CH1/CH2) on the Front Panel is set to LINE, the PHANTOM MIC power is turned OFF.

7. ANTON BATT (DIGITAL) Voltage Detect Level Change
   The time until UNDER CUT functions is too long after the BATT NEAR END WARNING of the ANTON BATT (DIGITAL) is displayed. It is improved.

8. Improvement of Filter Display
   When the Optical filter is NG position, FLT4 is displayed. It is improved.

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### 9. < LEVEL 6/6 Screen >

1. Normal 2 mode on the A. IRIS MODE is introduced.

```
        - LEVEL 6/6 -

→H PHASE COARSE   : 07
 H PHASE FINE     : 128
 SC PHASE COARSE : 0
 SC PHASE FINE    : 128
 A.IRIS LEVEL      : 063
 A.IRIS PEAK / AVE : 075
 A.IRIS MODE       : NORM1   ⇦  Added
 S.IRIS LEVEL      : 072
```

| Item | Variable Range | VF Display | Remarks |
|---|---|---|---|
| A. IRIS MODE | NORM1<br>NORM2<br>CENTR | ENG | Audio iris mode selection<br>NORM1 : Light metering over entire screen (except for edges).<br>**NORM2 : Light metering over entire screen (except for top).**<br>CENTR : Light metering which is focused solely on the screen center. The iris value which matches the subject is set for this mode even when the brightness of the subject at the center differs from that at the screen edges. |

*** Note ***

Auto Iris characteristics is changed with these software version up-grades. According to these changes, the initial setting of A. IRIS and S. IRIS are different between old software version and new one. When the software is up-graded and then load the user setting which saved the IC card before replacement of PROM, camera picture may become dark. So, A. IRIS and S. IRIS levels are set to new level as follows.

A. IRIS LEVEL : 62 → **63** S. IRIS LEVEL : 75 → **72**

And the following initial setting level is changed as follows.

| Menu | Menu Item | Original Setting | | New Setting | |
|---|---|---|---|---|---|
| VF DISPLAY | IRIS | IRIS | | S + IRIS | |
| FUNCTION 2/5 | S. SCAN MODE SEL | OFF | | ON | |
| FUNCTION 5/5 | LIMITTER | ON | | OFF | |
| LOW SETTING | H. DTL LEVEL | 8 | | 13 | |
| | H. DTL FREQ | 4 | | 3 | |
| | MASTER GAMMA | 0.45 | | 0.47 | |
| MID SETTING | H. DTL LEVEL | 8 | | 13 | |
| | DTL CORNING | 6 | | 5 | |
| | H. DTL FREQ | 4 | | 3 | |
| | MASTER GAMMA | 0.45 | | 0.47 | |
| HIGH SETTING | H. DTL LEVEL | 8 | | 10 | |
| | V. DTL LEVEL | 5 | | 8 | |
| | DTL CORNING | 10 | | 8 | |
| | H. DTL FREQ | 4 | | 3 | |
| LEVEL 5/6<br>TABLE A/B | MATRIX TABLE | A | B | A | B |
| | MATRIX R-G | 10 | +15 | 0 | +5 |
| | MATRIX R-B | 10 | +7 | 0 | -3 |
| | MATRIX G-R | 10 | +2 | 0 | -8 |
| | MATRIX B-R | 10 | +15 | 0 | +15 |
| | MATRIX B-G | 10 | +2 | 0 | +2 |
| LEVEL 6/6 | A. IRIS LEVEL | 62 | | 63 | |
| | A. IRIS PEAK / AVE | 60 | | 75 | |
| | S. IRIS LEVEL | 75 | | 72 | |

*** When PROM is replaced, MENU setting is returned to factory setting. If the MENU setting is returned to user setting, MENU data is saved to IC CARD or EVR NV-RAM before replacement of PROM.**

Replacement Method of PROM

1. Connect the EVR tool to AJ-D700 and set the ECU CONNECT on the SERVICE ADJ MENU to EVR, then insert the EVR connector to EC connector (6P) on the Side Panel. After setting, turn the MENU OFF.
2. Execute the CAM_TOOL.EXE to start the EVR program.
3. Follow the displayed instructions until MAIN MENU is shown. (If the bar graph stops before 100% and MAIN MENU is not opened, turn the Power of I/F Box (VFKW1000AA) OFF and ON. Then execute the EVR program again.)
4. Select < 1. BACK UP (DOWN LOAD) RAM DATA > and execute it to back up the current user data.
5. Turn the power OFF and replace the PROM to new version.
6. **Turn the Power ON and set the CAM/BAR SW to BAR mode.**
7. Select < 6. E.V.R. DIRECT FUNCTIONS >.
8. **Execute <1.CAMERA RESET No.1> (Press [F1] + [A]) to reset previous PROM parameter. Confirm that the color bar picture switched to the normal picture. If it is not, execute <1.CAMERA RESET No.1> (Press [F1] + [A]) again.**
9. **After executing CAMERA RESET, turn the power of AJ-D700 to OFF and then ON.**
10. **Select < 2. RESTORE (UP LOAD) RAM DATA >) and execute it to upload the user data.**
11. **After upload the user data, turn the power of AJ-D700 to OFF and then ON again.**

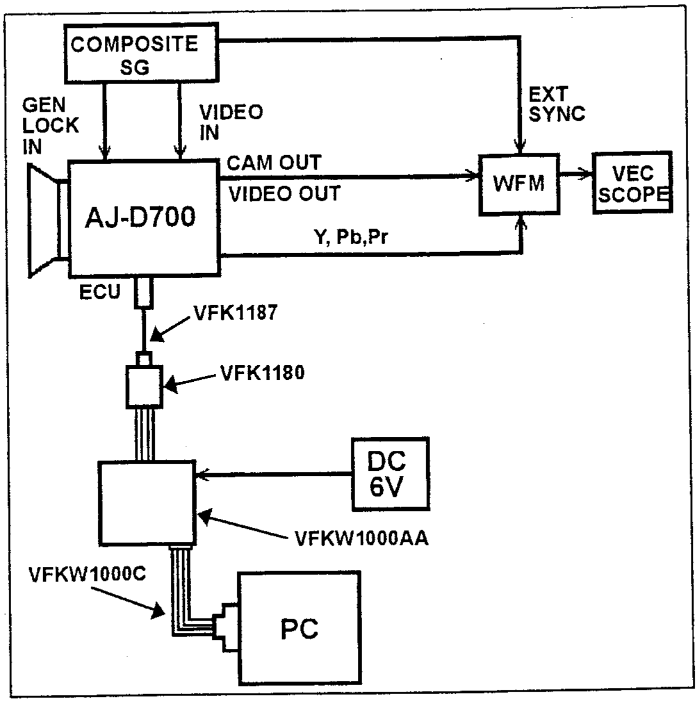

Fig. 5

MAIN MENU

1. BACK UP (DOWNLOAD) RAM DATA.
2. RESTORE (UPLOAD) RAM DATA.
3. PREPARATION OF ADJUSTMENT.
4. START ADJUSTMENT.
5. ELECTRICAL ADJUSTMENT.
6. E.V.R. DIRECT FUNCTIONS.
7. BACK UP (DOWNLOAD) RAM DATA.<OPTION>
8. RESTORE (UPLOAD) RAM DATA. <OPTION>

1. COMMAND INPUT FUNCTION

**[ E.V.R. FUNCTION ]**

COMMAND : [00]
DATA : 00
ADDRESS : 00

[ MACRO FUNCTION ]

1. CAMERA RESET No.1 [F1]. [A]
2. CAMERA RESET No.2 [F1]. [B]
3. VF OUT [F1]. [C]
4. MONITOR OUT LEVEL [F2]. [0]

≪ Page Up : INC Page Down DEC ≫

Order No. VSD9711SB665

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Standardization of IC

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN V17728+V17729 | 69 | VSD9606M501A/B | K7TKA0001 |
| AJ-D800E/EN V19646+V20161 | 20 | VSD9708M606A/B | K7TKA0001 |

Board : Servo (VEP02437B)

To standardize the parts, the microcomputer IC100 is changed from MN6755486H7H to MN6755486H8E on the component side.

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| IC100 | MN6755486H7H | MN6755486H8E | IC | 1 | |

AJ-D700

| Ref. No. | Schematic Diagram | | P.C. Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| C100 | 2-47 | B~E-4~6 | 3-11 | B-2 (C) |

AJ-D800

| Ref. No. | Schematic Diagram | | P.C. Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| C100 | SCM-53 | D~F-4~6 | CBA-11 | B-2 (C) |

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20161
〃 546

Order No. VSD9712SB666

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Introduction of Auto EQ/RF Adjustment System

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 70 | VSD9606M501A/B | --- |
| AJ-D800E/EN | 21 | VSD9708M606A/B | --- |

In order to increase serviceability of EQ/RF Adjustment, New Auto EQ/RF Adjustment System has been introduced.

## 1. Preparation

To perform the EQ/RF adjustment automatically, the following adjustment system should be prepared.

### 1-1. Special Tools

| No. | Current Part No. | New Part No. | Tool Name | Remarks |
|---|---|---|---|---|
| 1 | VFK1163 | ▨ VFK1163 | EQ Adj. Tool | See Paragraph 2-2 |
| 2 | VFK1158 | ▨ VFK1158A | B.E.R. Counter | See Paragraph 2-1 |
| 3 | VFK1160A | ▨ VFK1160B | Auto EQ Adj. Software | |
| 4 | VFK1162A | Same as current | EVR Software | |
| 5 | VFKW1000AA | Same as current | EVR I/F Box | |
| 6 | VFKW1000C | Same as current | EVR RS-232C Cable | |
| 7 | VFK1180 | Same as current | EVR Sub I/F Board | |
| 8 | VFK1187 | Same as current | EVR Cable | |
| 9 | VFK1185 | Same as current | B.E.R. Cable | |
| 10 | VFM3580KM | Same as current | Alignment Tape (1) | NTSC System |
| 11 | VFM3680KM | Same as current | Alignment Tape (1) | PAL System |
| 11 | VFK1300 | Same as current | A/D board | DAQ-12 |

▨ : Modification or new type is needed.

### 1-2. Measuring Equipment

| No. | Name of Equipment | Remarks |
|---|---|---|
| 1 | Personal Computer | IBM PC/AT Compatible |
| 2 | Monitor TV | |
| 3 | DC Power Supplier | DC 6V |
| 4 | DC Power Supplier | DC 8.5-12V |
| 5 | Oscilloscope | More than 100MHz |

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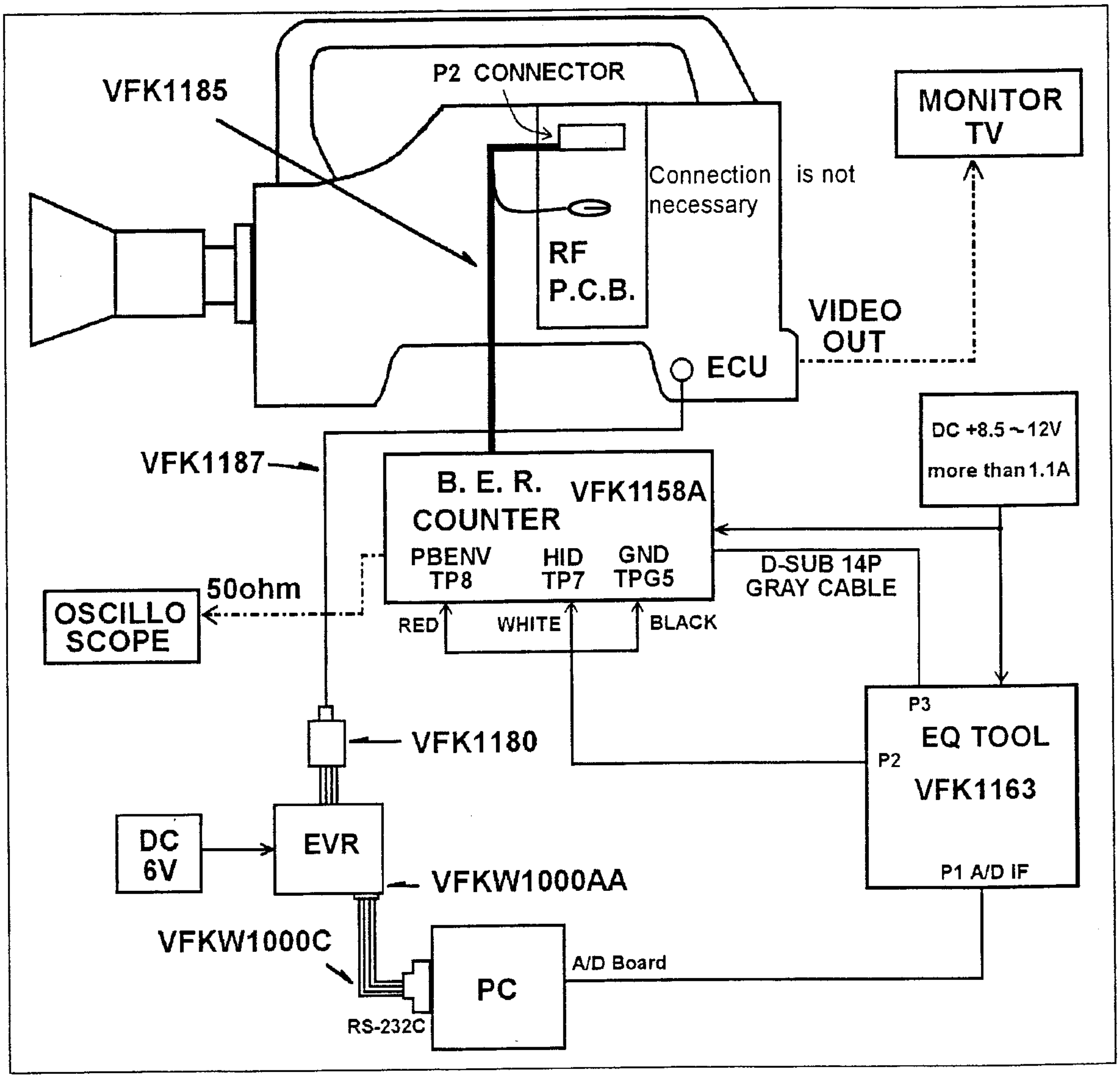
### 1-3. System Diagram



VFK1185
P2 CONNECTOR
MONITOR TV
Connection is not necessary
RF P.C.B.
VIDEO OUT
ECU
VFK1187
B. E. R. COUNTER
VFK1158A
PBENV TP8
HID TP7
GND TPG5
DC +8.5～12V more than 1.1A
D-SUB 14P GRAY CABLE
OSCILLO SCOPE
50ohm
RED
WHITE
BLACK
P3
EQ TOOL
P2
VFK1163
VFK1180
DC 6V
EVR
VFKW1000AA
P1 A/D IF
VFKW1000C
PC
A/D Board
RS-232C

Fig. 1

# 2. Modification

## 2-1. VFK1158 (Current B.E.R. Counter)

When modifying the current B.E.R. Counter with modification kit VFK1158AKIT, the B.E.R. counter performs the same function as VFK1158A.

### 2-1-1. Modification Kit (VFK1158AKIT)

The modification kit consisted of the following items.

| Part Name | Part No. | Quantity |
|---|---|---|
| Main P.C. Board | VFK1158KIT | 1 |
| Cable | --- | 1 |
| Auto EQ Software | VFK1160B | 1 |

### 2-1-2. Modification Procedure

1. Unscrew the 4 screws from the right and left panel (each 2 screws) and remove the Top Panel.

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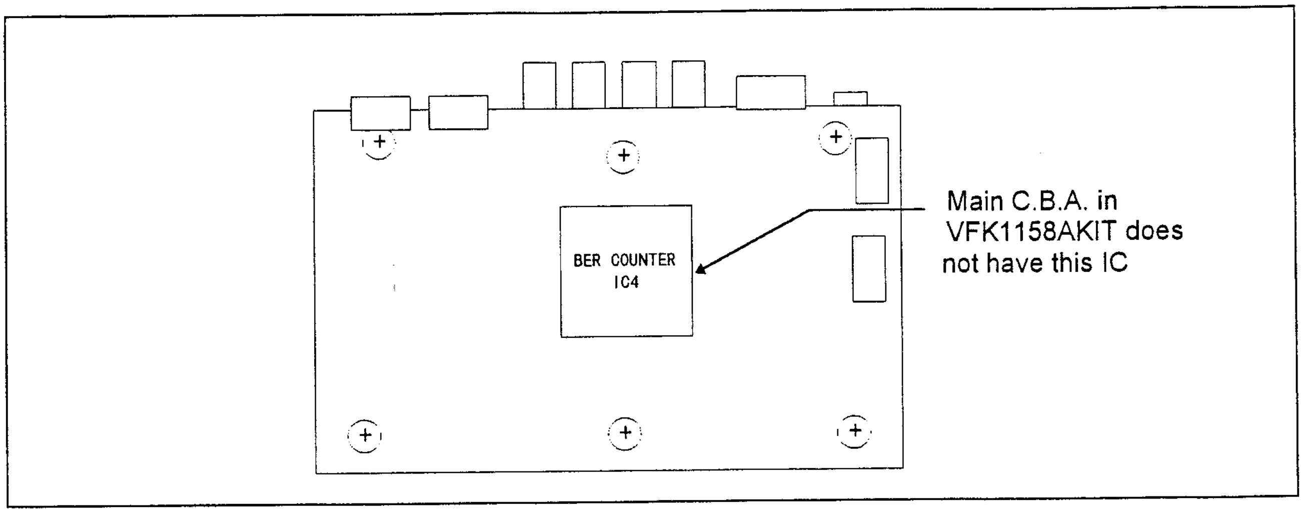
2. Remove the P.C. Board.
   1). Remove the 3 screws from the connector side on the Bottom Panel.
   2). Remove 4 screws from the Front Panel.
   3). Remove 3 screws from the LED side on the Main P.C. Board.
   4). Remove the Main P.C. Board from the front upper direction.
3. Remove IC4 from the socket on the original Main P.C. Board and insert it to the new Main P.C. Board (VFK1158AKIT). It is difficult to remove IC4, so use a metal sharp sticker and remove the IC slowly.
4. Set the new Main P.C. Board (VFK1158AKIT) with IC4 as reverse procedures of removal.
5. The Top Panel can not be set, because the 14Pin Connector is added. If the Top Panel must be used, bend the side panel at the connector side or cut it.



Main C.B.A. in VFK1158AKIT does not have this IC

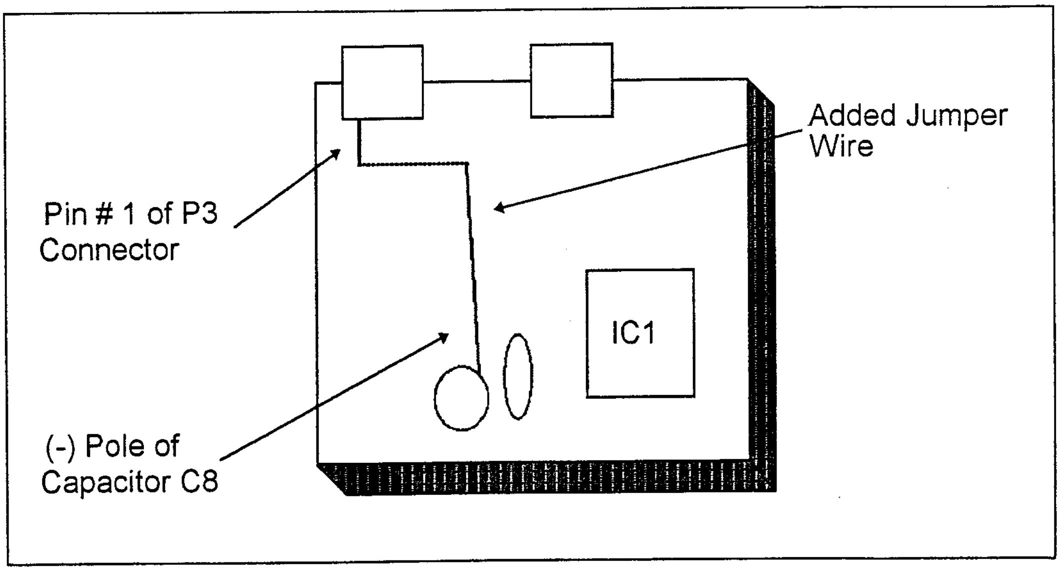
Fig. 2

## 2-2. VFK1163 (EQ Tool)

VFK1158A or modified VFK1158 (with VFK1158AKIT) needs to be supplied –5V from VFK1163 via pin #1 of 15Pin cable, so VFK1163 should be modified for this reason.
Since July, '97 production of VFK1163, the following modification has been introduced and mark "A" has been added on the serial number plate

### 2-2-1. Modification Procedure

1. Unscrew 4 screws and remove the Top Cover.
2. Add a jumper wire between pin # 1 of P3 and (-) pole of capacitor C8 as shown below.
3. Install the Top Cover as reverse procedures of removal.



Added Jumper Wire

Pin # 1 of P3 Connector

(-) Pole of Capacitor C8

Fig. 3

# 3. Adjustment Procedures

## 8. RF Adjustment

### 8-1. System Hook UP and Setting

- **System Hook UP**

1. Connect the Camera with the Auto EQ/RF Adjustment System as shown Figure 1.
2. IC connection clip cable from the VFK1185 is not necessary (open).
3. Set the switches on the B.E.R. counter as follows.
   ERROR COUNT SW : ON
   CH SELECT SW : AUTO
   (L/R : Any one)

- **Menu Setting on Camera Recorder**

1. Open the operation panel.
2. Press [SHIFT], [+] and [-] buttons, and set the MENU switch to the SET position.
3. Set the menu setting as follows:
   PAGE : SERVICE ADJ.
   ECU CONNECT :EVR
   CONCEAL :OFF
   INNER ECC :OFF
   OUTER ECC :OFF
   SERVO MODE :ATF
4. After the above menu setting, close the menu mode.

- **Auto Adjustment System Normalization (Calibration)**

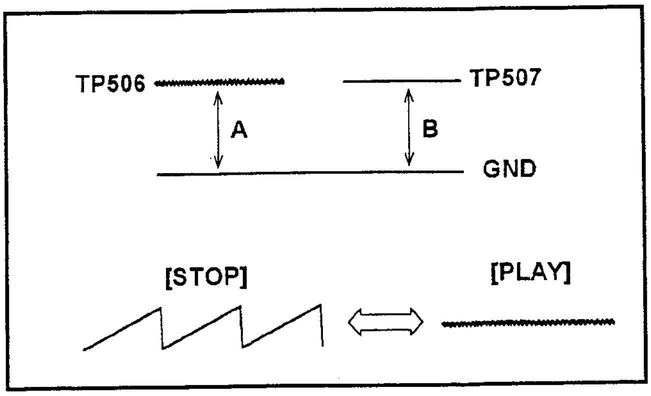
The system normalization (calibration) should be performed when using the adjustment system at the first time (after the completion of the system hook up) or changing the A/D board, PC or EQ tool.
Also, we recommend to perform it regularly
The auto adjustment system normalization procedure, please refer to paragraph 4. In this supplement service manual.

### 8-2. PLL VCO Adjustment

| | |
|---|---|
| **BOARD** | RF |
| **SPEC.** | A=B=2.0±0.1V |
| **TEST** | TP506, TP507 |
| **ADJUST** | EVR |
| **MODE** | PLAY |
| **TAPE** | Color Bar |
| **M.EQ** | Oscilloscope, EVR |

**EVR Setting**
CMD : 02 DATA : **7A** ADR : **0B**

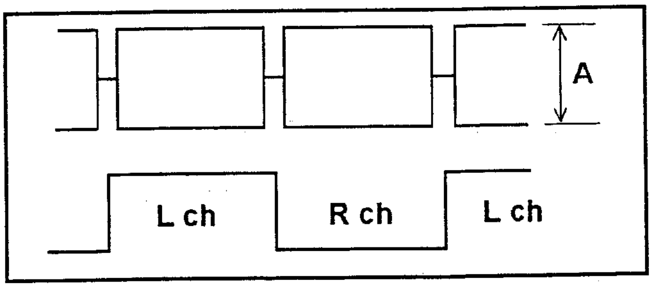
1. Monitor the waveform at **TP506** and **507** in the DC mode.
2. Press the [→] or [←] key in the EVR so that the levels A and B are the same.



### 8-3. R/P Envelope Level Confirmation

| | |
|---|---|
| **BOARD** | RF |
| **SPEC.** | A≧70mV |
| **TEST** | R/P ENV,HSW (B.E.R. Counter)<br>(50Ω terminated) |
| **MODE** | PLAY |
| **TAPE** | Color Bar |
| **M.EQ** | Oscilloscope |

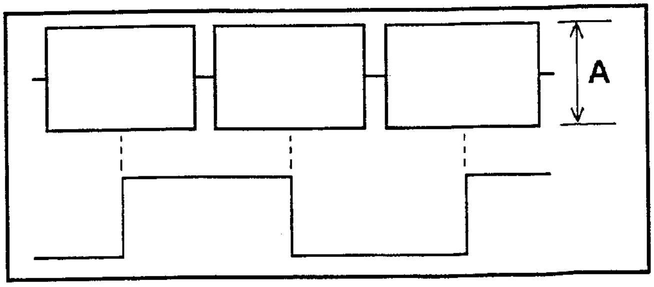
1. Confirm that the waveform is as flat.



### 8-4. PB Envelope Level Adjustment

| | |
|---|---|
| **BOARD** | RF |
| **SPEC.** | 100±10mV |
| **TEST** | PB ENV, HSW(B.E.R. Counter)<br>(50Ω terminated). |
| **ADJUST** | VR400(PB L), VR401(PB R) |
| **MODE** | PLAY |
| **TAPE** | Color Bar |
| **M.EQ** | Oscilloscope |

1. Confirm that the waveform is as shown in the figure below.
2. Adjust the **VR400**(L ch) and **VR401**(R ch) so that the level A is within the specification.



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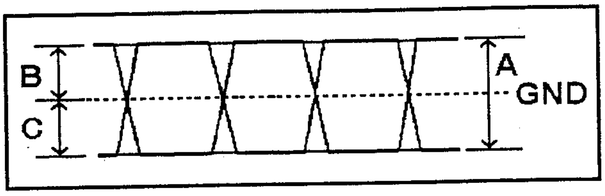
## 8-5. HSE Input Confirmation

| | |
|---|---|
| **BOARD** | RF |
| **TEST** | TP201, TP300(Trigger) |
| **ADJUST** | VR200(DUTY) |
| **MODE** | REC |
| **TAPE** | Blank Tape |
| **M.EQ** | Oscilloscope |

1. Set the oscilloscope to AC mode.
2. Monitor the **TP201** and confirm that A is 1.3 ± 0.1V.
3. Confirm that B and C are the same.
4. If necessary, adjust the **VR200** slightly.



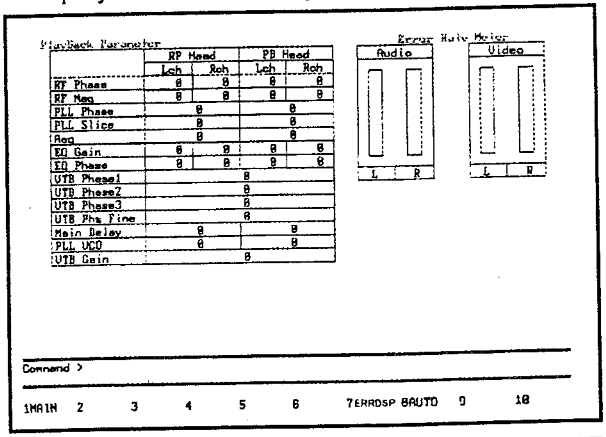
## 8-6. PB Equalizer Adjustment(Auto)

### Menu Setting

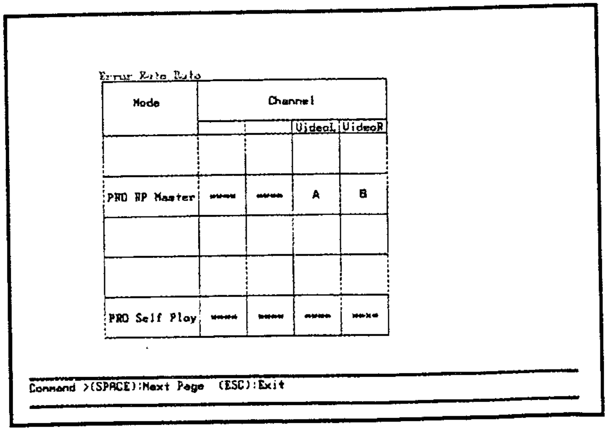
1. Open the operation panel.
2. Pressing [SHIFT], [+] and [-] buttons, set the MENU switch to the SET position.
3. Set the menu as follows:
   PAGE : SERVICE ADJ.
   ECU CONNECT :EVR
   CONCEAL :OFF
   INNER ECC :OFF
   OUTER ECC :OFF
   SERVO MODE :ATF
4. After the above setting, close the menu.

### Auto Adjustment Software Boot UP

1. Copy the all files contained in floppy disk (VFK1160B) to a directory of hard disc drive. (ex. C:¥DVCEQ)
2. Execute DVCRF.EXE file on DOS command prompt condition. (ex. "C:¥DVCEQ¥DVCRF")
3. Select (2) AJ-D700 in DVCPRO MODEL SELECT.
4. Select (1) NORMAL in PROGRAM SELECT.
5. Wait about 20 seconds for the parameter loading. To short cut this 20 seconds, confirm the power switch of the all equipment are turned ON and then press the "ENTER" key.
6. Personal Computer (PC) asks "Do you transfer BOOT PROGRAM ?" then once turn the power switch of the EVR I/F box OFF and ON, and then select the [Y].
7. PC asks whether any error has happened or not.
8. MAIN MENU is available.
   F1 MENU
   1. PB Adjustment
   2. REC Adjustment
   3. Result
   4. File
   5. Restart
   6. End
9. Select 1.PB Adjustment.
10. Select whether downloading data from VTR or not.
11. Press F8 to select the AUTO.
12. Confirm that there is no tape in the VTR and press the [ENTER] key.
13. PC asks "Initial Adjust ?". Select the [Y].
14. Select 1. All Adjust in PB Auto Menu.
15. Insert the Alignment tape and play back the color bar portion according to the instruction on the display.
16. During the auto adjustment don't touch the VTR,TOOL and PC.
    Please note that the audio error rate is not displayed in the auto adjustment.


PlayBack Parameter

| | RP Head | | PB Head | |
|---|---|---|---|---|
| | Lch | Rch | Lch | Rch |
| RF Phase | 0 | 0 | 0 | 0 |
| RF Mag | 0 | 0 | 0 | 0 |
| PLL Phase | 0 | | 0 | |
| PLL Slice | 0 | | 0 | |
| Aeq | 0 | | 0 | |
| EQ Gain | 0 | 0 | 0 | 0 |
| EQ Phase | 0 | 0 | 0 | 0 |
| UTB Phase1 | 0 | | | |
| UTB Phase2 | 0 | | | |
| UTB Phase3 | 0 | | | |
| UTB Phs Fine | 0 | | | |
| Main Delay | 0 | | 0 | |
| PLL UCO | 0 | | 0 | |
| UTB Gain | 0 | | | |

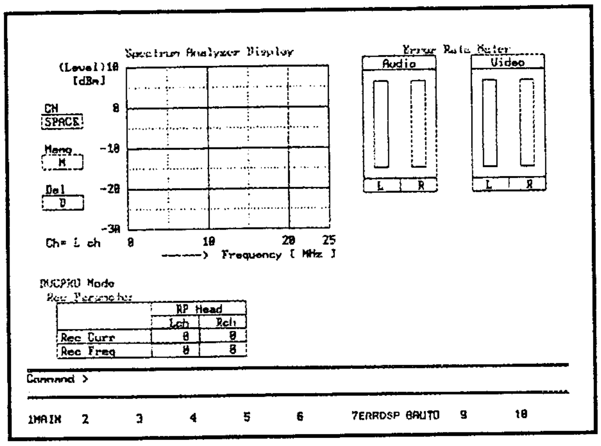

Error Rate Ratio

| Mode | Channel | | | |
|---|---|---|---|---|
| | | | VideoL | VideoR |
| | | | | |
| PRO RP Master | **** | **** | A | B |
| | | | | |
| | | | | |
| PRO Self Play | **** | **** | **** | **** |

17. Adjustment may complete after 5-6 minuets.
18. Error rate is measured and displayed.
19. Confirm that the data A and B are green color. If there is any red color, try the same adjustment again after cleaning of the video head and tape transportation.

## 8-7. Rec. Curr. & Freq. Adjustment

1. Open the MAIN MENU according to the same procedure as the PB Equalizer Adjustment.
2. Select 2. REC Adjustment in the MAIN MENU.
3. PC asks whether download the VTR data from the VTR or not.
4. Select [Y] so that the VTR adjustment data are saved in to the PC.
5. Press F8 to select the AUTO.
6. Select 1.Adjust start in the sub menu.
7. Insert the alignment tape and play back the color bar portion according to the instruction on the display.
8. After memorizing the playback data, insert a blank tape and start a recording according to the instruction on the display.
9. During the adjustment, don't touch the VTR and PC adjustment system.
10. During the adjustment, audio error rate in not displayed.


Spectrum Analyzer Display
(Level)10
[dBm]
8
-10
-20
-30
CH
SPACE
Memo
M
Del
D
Ch= L ch
0
10
20
25
———> Frequency [ MHz ]
Error Rate Meter
Audio
Video
L
R
L
R

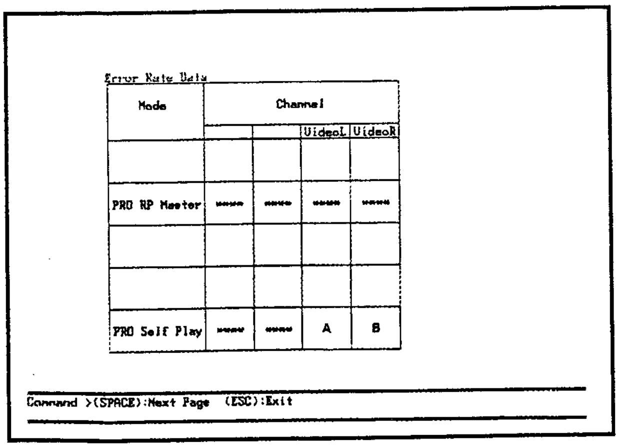
DVCPRO Mode
Rec Parameter

| | RP Head | |
|---|---|---|
| | Lch | Rch |
| Rec Curr | 0 | 0 |
| Rec Freq | 0 | 0 |

Command >

1MAIN 2 3 4 5 6 7ERRDSP 8AUTO 9 10

11. Rewind the recorded tape which was recorded on the blank tape and play back the recorded portion according to the instruction on the display.
12. The error rate is measured and displayed.
13. Confirm that the data A and B are green color.



Error Rate Data

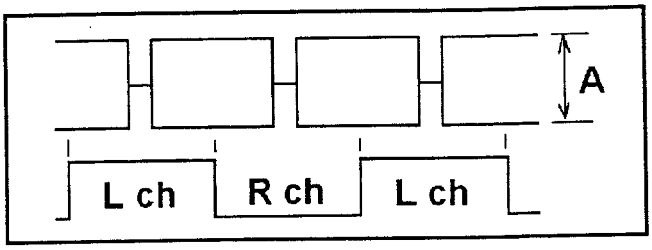
| Mode | Channel | | | |
|---|---|---|---|---|
| | | | VideoL | VideoR |
| | | | | |
| PRO RP Master | ***** | ***** | ***** | ***** |
| | | | | |
| | | | | |
| PRO Self Play | ***** | ***** | A | B |

Command >(SPACE):Next Page (ESC):Exit

## 8-8. Confidence PB Adjustment

| | |
|---|---|
| **BOARD** | RF |
| **SPEC.** | 100±10mV |
| **TEST** | PB ENV, HSW (B.E.R. Counter)<br>(50Ω terminated) |
| **ADJUST** | VR400(PB L), VR401(PB R) |
| **INPUT** | Internal Color Bar |
| **MODE** | REC |
| **TAPE** | Blank Tape |
| **M.EQ** | Oscilloscope |

1. Place the unit in the confidence PB mode.
2. Adjust **VR400** and **401** so that the level A is within the specification.

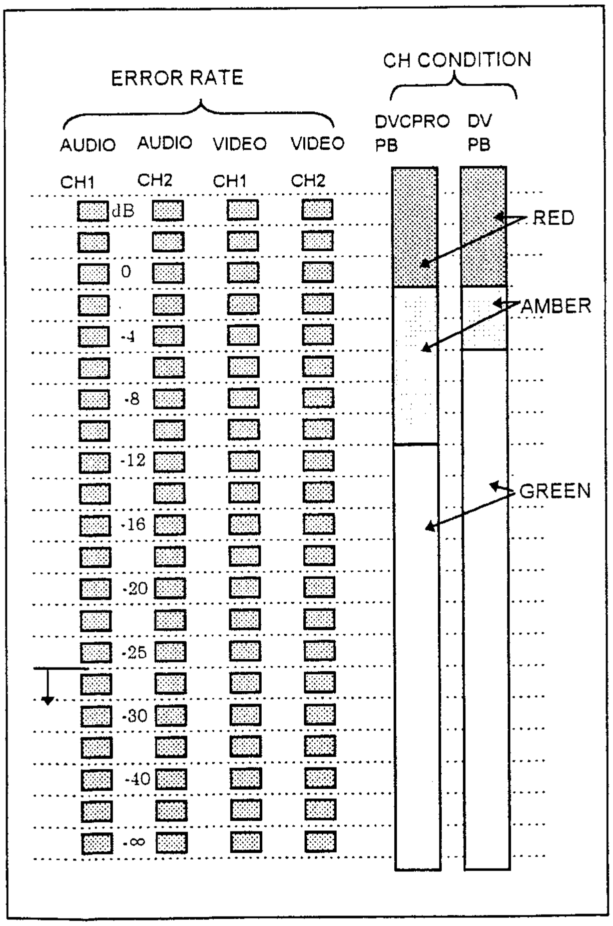

A
L ch
R ch
L ch

9712 SB 666

## 8-9. Final Confirmation

| | |
|---|---|
| **BOARD** | RF |
| **TEST** | VIDEO OUT |
| **INPUT** | Internal Color Bar |
| **MODE** | REC, PLAY |
| **M.EQ** | B.E.R. Counter, Monitor TV |

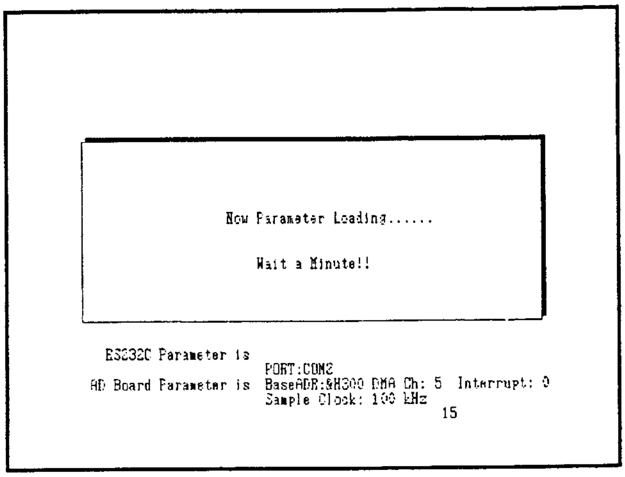
1. Record the internal color bar signal.
2. Play back the recorded portion.
3. Confirm that the error rate is less than **250** on the L and R channels.
4. Play back the recorded portion on a studio editing DVCPRO and confirm that the error rate is less than A as shown in the figure below..
5. If it is not less than A, readjust Rec Current and Frequency Response.
6. Set the menu as follows:
   PAGE : SERVICE ADJ.
   INNER ECC :ON
   OUTER ECC :ON
7. Confirm that there is no error in the playback picture.



# 4. Important Notice

## 4-1. Auto Adjustment System Normalization (Calibration) Procedure

1. Boot up the auto adjustment system according paragraph 8-6.

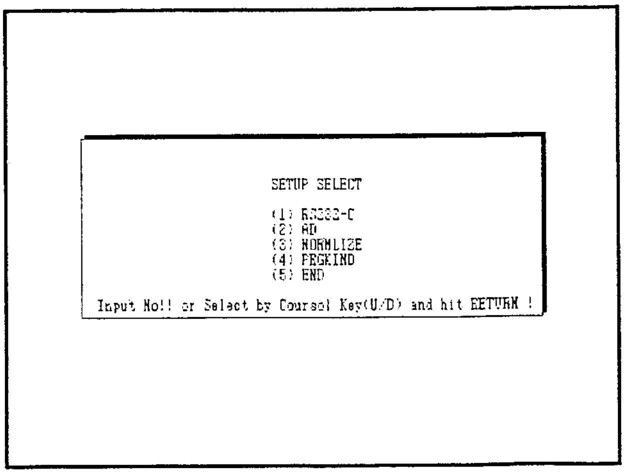


```
Now Parameter Loading......

Wait a Minute!!

RS232C Parameter is
                        PORT:COM2
AD Board Parameter is   BaseADR:&H300 DMA Ch: 5  Interrupt: 0
                        Sample Clock: 100 kHz
                                               15
```

2. During parameter count down, press the "F2" as shown in figure below.
3. Select "(3) NORMALIZE" when the display shows "SET UP SELECT as shown the figure below.

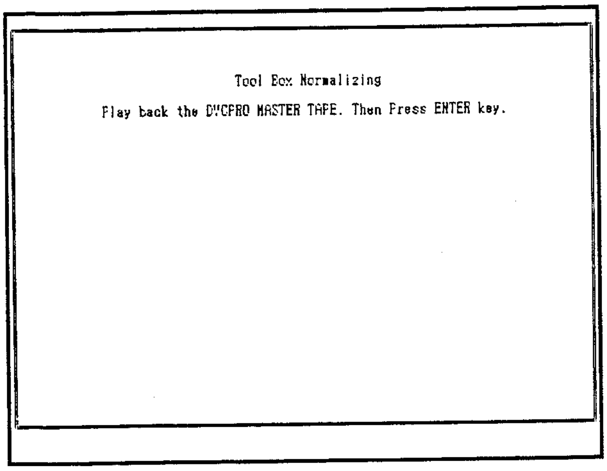


```
SETUP SELECT

(1) RS232-C
(2) AD
(3) NORMLIZE
(4) PEGKIND
(5) END

Input No!! or Select by Coursol Key(U/D) and hit RETURN !
```

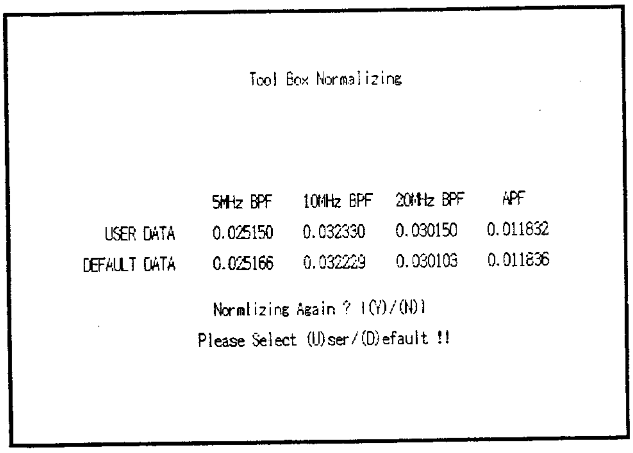
4. When display shows "TOOL BOX NORMALIZING", play back the color bar portion of the alignment tape and press the ENTER key.



```
Tool Box Normalizing

Play back the DVCPRO MASTER TAPE. Then Press ENTER key.
```

5. Wait for the completion of USER DATA measurement. When measurement is completed, the display shows the USER DATA and DEFAULT DATA at the upper side of the display.
6. Compare the USER DATA and DAFAULT DATA, and confirm that the difference is within ± 0.01 as shown in figure below.
7. The PC asks "NORMALIZING AGAIN?"



```
                      Tool Box Normalizing



               5MHz BPF    10MHz BPF   20MHz BPF    APF
   USER DATA   0.025150    0.032330    0.030150    0.011832
DEFAULT DATA   0.025166    0.032229    0.030103    0.011836

                  Normlizing Again ? [(Y)/(N)]
                 Please Select (U)ser/(D)efault !!
```

8. If value is within the specification, press the "N" key.
9. The PC asks "PLEASE SELECT (U)ser/(D)efault".
10. Press "U" to select the USER. This USER data becomes as the DEFAULT data from the next operation as shown in figure above.
11. If the value is not within the specification, confirm the connection of the adjustment system and quality of the alignment tape, and perform the above steps 7 and 8 again.
12. ("NORMALIZING AGAIN?", press the "Y")
13. If it is not improved after several times may be something wrong with the EQ tool.
14. When performing the Auto Adjustment System Normalization regularly under condition of the same combination of the PC, A/D Board and EQ Tool, the difference of USER DATA and DEFAULT DATA should be within ± 0.005.

VJ7728✓
VJ7729

Order No. VSD9804SB668

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Correction in Parts Number List

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 72 | VSD9606M501A/B | --- |

Board : CDS (VEP25016B)

**Part Number**

| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
|---|---|---|---|---|---|
|  | VEP25016A | VEP25016B | CDS P.C. BOARD. | 1 |  |

TE4578

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V17728 ✓
V17729

Order No. VSD9804SB669

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Correction in Parts Number List

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 73 | VSD9606M501A/B | --- |

Board : Read Jack (VEP01786A)

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| P1001 | VJP3810A040 | VJP3810E040 | CONNECTOR (MALE) | 1 | |

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Order No. VSD9804SB670

# Technical Bulletin

## Supplement to the Service Manual

**Broadcast Product**

## Subject : Change of IC

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN V17728+V17729 | 74 | VSD9606M501A/B | K7TKA0001 |
| AJ-D800E/EN V19646+V20161 | 22 | VSD9708M606A/B | K7TKA0001 |

Board : EVF Video (VEP29022A)

### Reason for Change

- ☐ The following part(s) has(have) been changed for serviceability improvement.
- ■ The following part(s) has(have) been changed for productivity improvement.
- ■ The following part(s) has(have) been changed for standardization.
- ☐ The following part(s) has (have) been changed for the safety regulation.

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| IC9005 | MC74HC164F | MC74HC164AF | IC | 1 | |

AJ-D700

| Ref. No. | Schematic Diagram | | P.C. Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| IC9005 | 2-86 | G-9 | — | — |

AJ-D800

| Ref. No. | Schematic Diagram | | P.C. Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| IC9005 | SCM-101 | G-9 | — | — |

10621SE0794

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Order No. VSD9804SB672

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Reduction of Audio Input Line Noise after Power ON

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN ✓ V17728 + V17729 | 76 | VSD9606M501A/B | K7TKA0001 |
| AJ-D800E/EN V18646 + V20161 | 25 | VSD9708M606A/B | K7TKA0001 |

Board : Audio LCD (VEP04522B)
Audio LCD (VEP04690A)

Symptom : Audio noise may appear at the Audio Input Line and the meter of the Mixer may swing fully when the Camera Power Supply is turned ON connected with the Mixer at the Rear Audio Input.

Cause : +48V for Phantom MIC is output momentarily and it results in Audio Input Line noise.

Remedy : To reduce the Audio Input Line noise, the following modification is performed.

**1. The unit produced before Serial Number C8TKA******

1). LCD microcomputer IC4603 is changed from UPD75328G742 to UPD75328G769 on the component.

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| IC4603 | UPD75328G742 | UPD75328G769 | IC | 1 | |

Audio LCD Board (VEP04522B) – AJ-D700E/EN

| Ref. No. | Schematic Diagram | | P.C. Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| IC4603 | 2-75 | C~D-3~5 (6/9) | 3-17 | E-2 (F) |

Audio LCD Board (VEP04522B) – AJ-D800EN

| Ref. No. | Schematic Diagram | | P.C. Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| IC4603 | SCM-81 | C~D-3~5 (6/9) | CBA-15 | E-2 (F) |

Audio LCD Board (VEP04690A) – AJ-D800E

| Ref. No. | Schematic Diagram | | P.C. Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| IC4603 | SCM-90 | C~D-3~5 (6/9) | CBA-14 | E-2 (F) |

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**2. The unit produced after Serial Number C8TKA******

1). LCD microcomputer IC4603 is changed from UPD75328G742 to UPD75328G769 on the component.

2). Capacitors C4171 and C4271 (16V/0.1μF) are not installed. (Please refer to the Technical Bulletin No. VSD9710SB660 and VSD9711SG604)

* Note * **If the LCD IC has been replaced to new one and the capacitors C4171 and C4271 have been installed, there is no affect to operate the unit. So, it is not necessary to remove the capacitors.**

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| C4171 | ECUX1C104KBV | --- | C. CAPACITOR CH 16V 0.1U | 1→0 | |
| C4271 | ECUX1C104KBV | --- | C. CAPACITOR CH 16V 0.1U | 1→0 | |
| IC4603 | UPD75328G742 | UPD75328G769 | IC | 1 | |

Audio LCD Board (VEP04522B) – AJ-D700E/EN

| Ref. No. | Schematic Diagram | | P.C. Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| C4171 | 2-70 | G-3 (1/9) | 3-17 | B-2 (F) |
| C4271 | 2-70 | G-4 (1/9) | 3-17 | B-2 (F) |
| IC4603 | 2-75 | C~D-3~5 (6/9) | 3-17 | E-2 (F) |

Audio LCD Board (VEP04522B) – AJ-D800EN

| Ref. No. | Schematic Diagram | | P.C. Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| C4171 | SCM-76 | B-3 (1/9) | CBA-15 | B-2 (F) |
| C4271 | SCM-76 | B-4 (1/9) | CBA-15 | B-2 (F) |
| IC4603 | SCM-81 | C~D-3~5 (6/9) | CBA-15 | E-2 (F) |

Audio LCD Board (VEP04690A) – AJ-D800E

| Ref. No. | Schematic Diagram | | P.C. Board | |
|---|---|---|---|---|
| | Page | Area No. | Page | Area No. |
| C4171 | SCM-85 | B-3 (1/9) | CBA-14 | A-1 (F) |
| C4271 | SCM-85 | B-4 (1/9) | CBA-14 | A-1 (F) |
| IC4603 | SCM-90 | C~D-3~5 (6/9) | CBA-14 | E-2 (F) |

Order No. VSD9804SB675

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

### Subject : Reduction of Audio Pop Noise

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN V17728+V17729 | 79 | VSD9606M501A/B | C8TKA0001 |
| AJ-D800E/EN V19646+V20161 | 29 | VSD9708M606A/B | C8TKA0001 |

Board : Video Main (VEP03B96B)

Symptom : Audio pop noise may occur when the tape which is recorded by AJ-D700 is played back with AJ-D750.

Cause : When the power is turned ON and then OFF, the phase of audio frame pulse and audio clock is not fixed. Then latch timing failure may occur in the LSI and audio sample number in 1 frame becomes irregular. It results in audio pop noise.

Remedy : To reduce the audio pop noise, the following modification is performed.

1). Remove the leg of pin #13 of IC33 on the component side as shown in figures 1 and 3.
2). Connect a jumper wire between pin # 12 of IC33 on the component side and through the hole and the CTP land (near pin #9 of IC14) on the foil side as shown in figures 1, 2, 3 and 4.

Video Main P.C. Board (VEP03B96B)

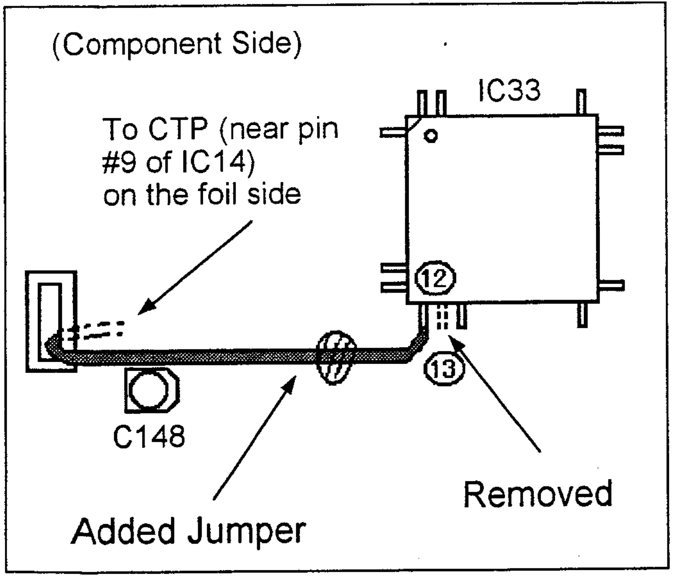
(Component Side)
IC33
To CTP (near pin #9 of IC14) on the foil side
⑫
⑬
C148
Removed
Added Jumper

Fig. 1 Page 3-12 (B-2) / CBA-12 (B-2)

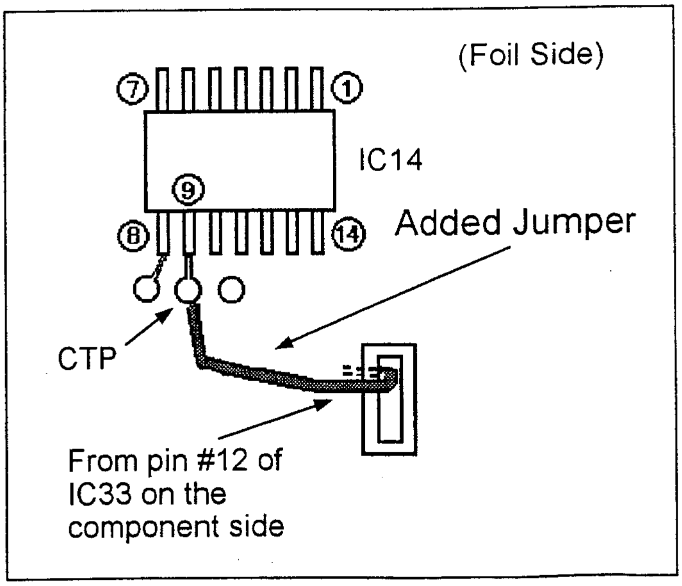
(Foil Side)
⑦
①
IC14
⑨
⑧
⑭
Added Jumper
CTP
From pin #12 of IC33 on the component side

Fig. 2 Page 3-12 (C-2) / CBA-12 (C-2)

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Video Main (6/7) Schematic Diagram

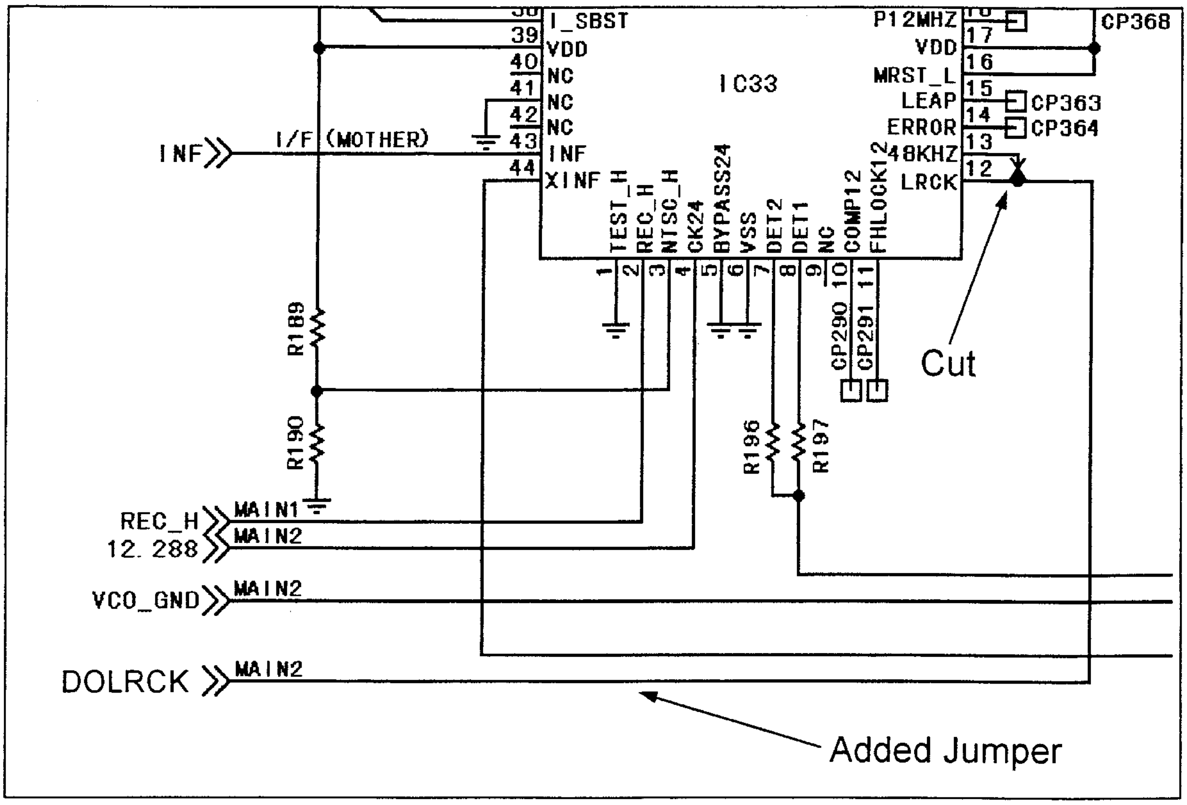

I_SBST
VDD
NC
NC
NC
INF
XINF
IC33
P12MHZ
VDD
MRST_L
LEAP
ERROR
48KHZ
LRCK
CP368
CP363
CP364
TEST_H
REC_H
NTSC_H
CK24
BYPASS24
VSS
DET2
DET1
NC
COMP12
FHLOCK12
CP290
CP291
R189
R190
R196
R197
INF
I/F (MOTHER)
REC_H
12. 288
VCO_GND
DOLRCK
MAIN1
MAIN2
MAIN2
MAIN2
Cut
Added Jumper

Fig. 3 Page 2-66 (F-2~5) / SCM-72 (A-2~5)

Video Main (2/7) Schematic Diagram

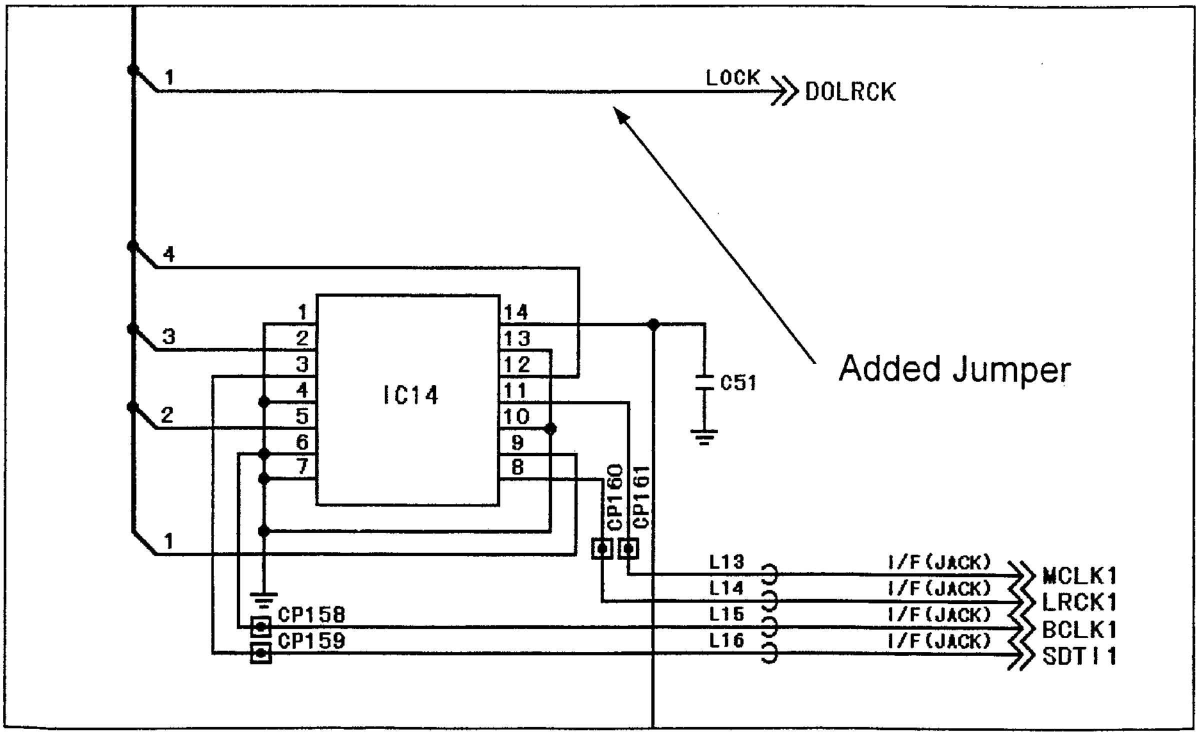

LOCK
DOLRCK
IC14
C51
CP158
CP159
CP160
CP161
L13
L14
L15
L16
I/F (JACK)
I/F (JACK)
I/F (JACK)
I/F (JACK)
MCLK1
LRCK1
BCLK1
SDTI1
Added Jumper

Fig. 4 Page 2-62 (F-9) / SCM-68 (I-13)

Order No. VSD9808SB688

# Technical Bulletin

***Supplement to the Service Manual*** **Broadcast Product**

## Subject : Improvement of Pinch Roller

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 92 | VSD9606M501A | C8TKA0001 |
| AJ-D800E/EN | 52 | VSD9708M606A | C8TKA0001 |

Mechanical Chassis Assembly (2)

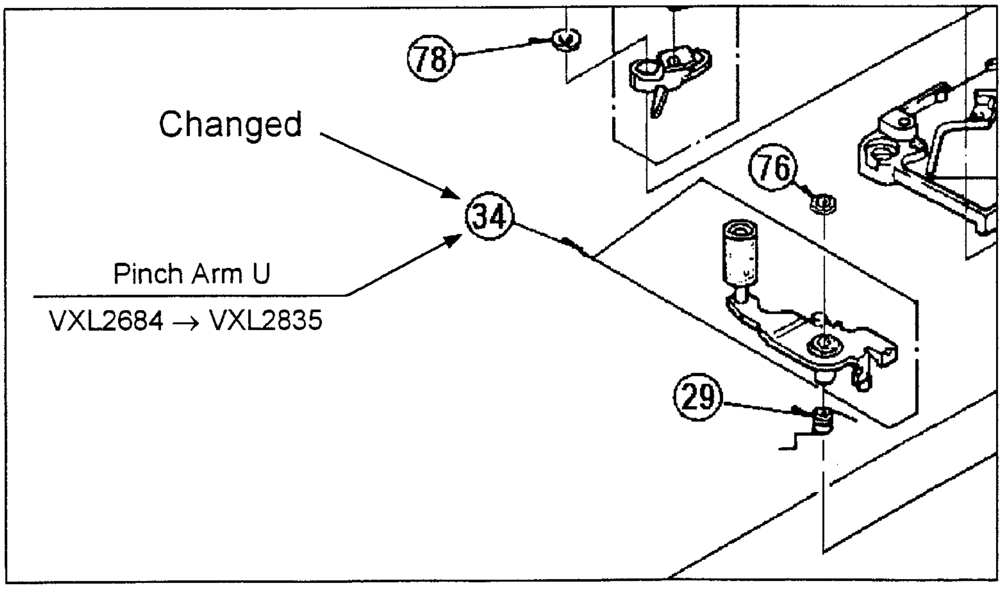
Symptom : Pinch Roller may be cracked.

Cause : Due to the lack of plasticizer from the Pinch Roller rubber and atmosphere. (Ozone) It results in Pinch Roller crack.

Remedy : To prevent it, the Pinch Arm Unit is changed from VXL2684 to VXL2835 as shown below.

**Part Number**

| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
|---|---|---|---|---|---|
| 34 | VXL2684 | VXL2835 | PINCH ARM U | 1 | |



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Order No. VSD9808SB694

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Improvement of Main Cam Arm Unit

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 98 | VSD9606M501A | D8TKA0001 |
| AJ-D800E/EN | 58 | VSD9708M606A | D8TKA0001 |

Mechanical Chassis Assembly (2)

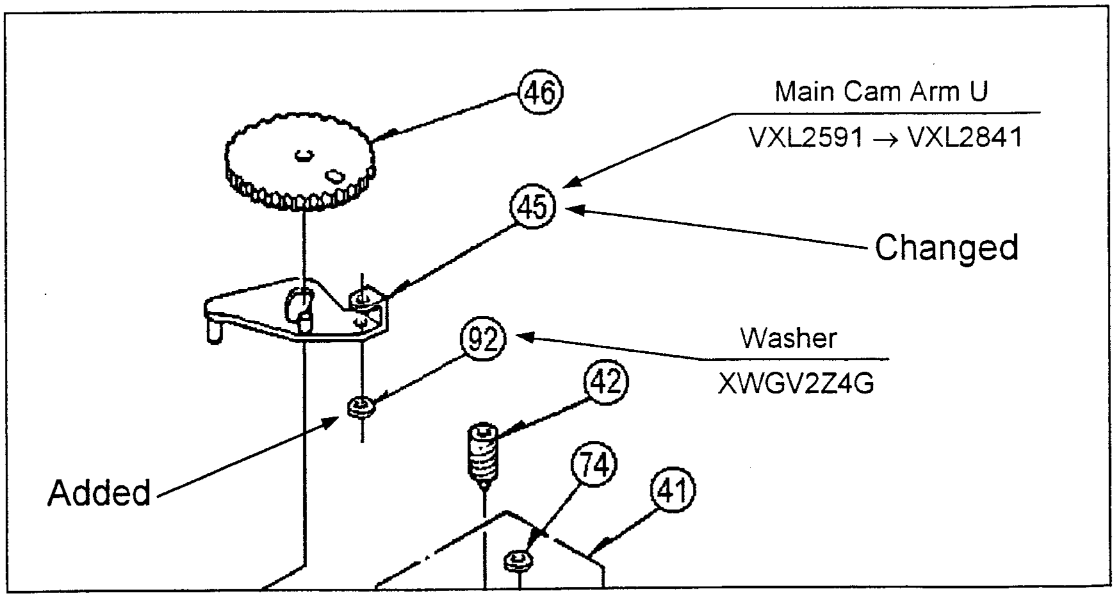
Symptom : U-shaped portion of the Main Cam Arm Unit may be broken when the loading is repeated.

Cause : Due to the lack of material strength.

Remedy : To prevent it, the Main Cam Arm Unit is changed from VXL2591 to VXL2841 and the washer (XWGV2Z4G) is added under the Main Cam Arm Unit as shown below.

**Part Number**

| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
|---|---|---|---|---|---|
| 45 | VXL2591 | VXL2841 | MAIN CAM ARM U | 1 | |
| 92 | — | XWGV2Z4G | WASHER | 0→1 | |



M1566TM3792

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13802 # V17728 + V17729
1031032 # V20161 + V19646

Order No. VSD9809SB699

# Technical Bulletin

## *Supplement to the Service Manual*

Broadcast Product

## Subject : Improvement of Reinforcement of Slider Lock Function

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 103 | VSD9606M501A | H8TKA0001 |
| AJ-D800E/EN | 63 | VSD9708M606A | H8TKA0001 |

EVF Assembly

To improve the reinforcement of the Slider Lock function, the EVF Attachment Assembly is changed as shown below.

*** Note ***
**The following parts as shown below are replaced at the same time.**

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| 23 | VGM1267 | VGM1458 | LOCK BASE | 1 | |
| 24 | VDB1393 | — | BUSHING | 1→0 | |
| 25 | VGM1266 | VGM1457 | LOCK TABLE | 1 | |
| 26 | VMS5862 | VMS6274 | SHAFT (B) | 1 | |
| 27 | VGQ3989 | — | SHAFT STOPPER | 1→0 | |
| 28 | VGM1265 | VGM1456 | PLATE (B) | 1 | |
| 29 | VGU7076 | VGU7714 | LOCK LEVER | 1 | |
| 30 | VGM1264 | VGM1455 | PLATE (A) | 1 | |
| 31 | VDB1392 | — | BUSHING A | 2→0 | |
| 32 | VMS5861 | VMS6273 | SHAFT (A) | 2 | |
| 33 | VGQ3989 | — | SHAFT STOPPER | 2→0 | |
| 53 | VGQ4181 | — | LOCK SOCKET | 1→0 | |
| 62 | XQS2+A6FZ | — | SCREW | 12→0 | |
| 65 | XSB3+8FZ | XSB3+8VZ | SCREW | 5 | |
| 66 | XSB4+8FZS | XSB5+8VCK | SCREW | 3 | |
| 81 | — | XUC2FP | E-RING | 0→1 | |
| 90 | — | VMS6275 | EVF LOCK SHAFT | 0→1 | |
| 91 | — | VYQ1638 | EVF ATTACHMENT ASS'Y | 0→1 | |

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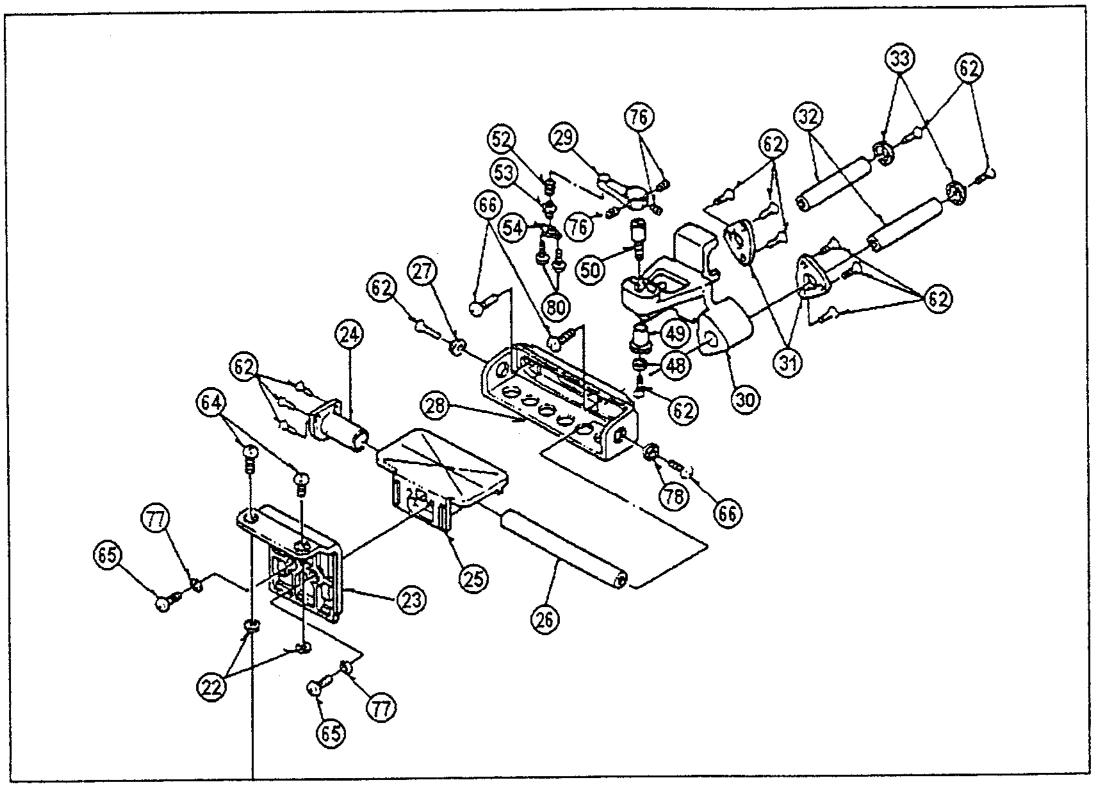

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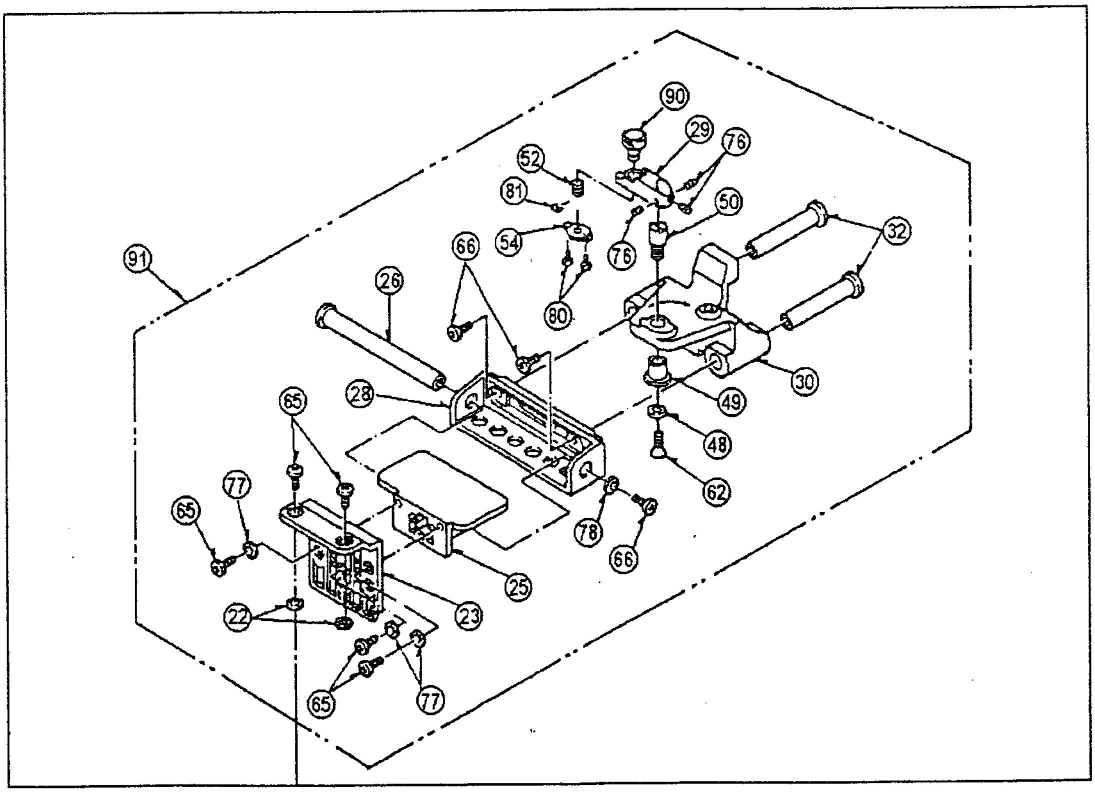


VJ7723# 1333Q21 Vol-1 700

Order No. VSD9811SB709

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Waterproofing EVF

| Please use this supplement together with the Service Manual as follows : | | | |
|---|---|---|---|
| Model No. | Bulletin No. | Order No. | Effective from |
| AJ-D700E/EN | 113 | VSD9606M501A | L8TKA0001 |
| AJ-D800E/EN | 76 | VSD9708M606A | L8TKA0001 |

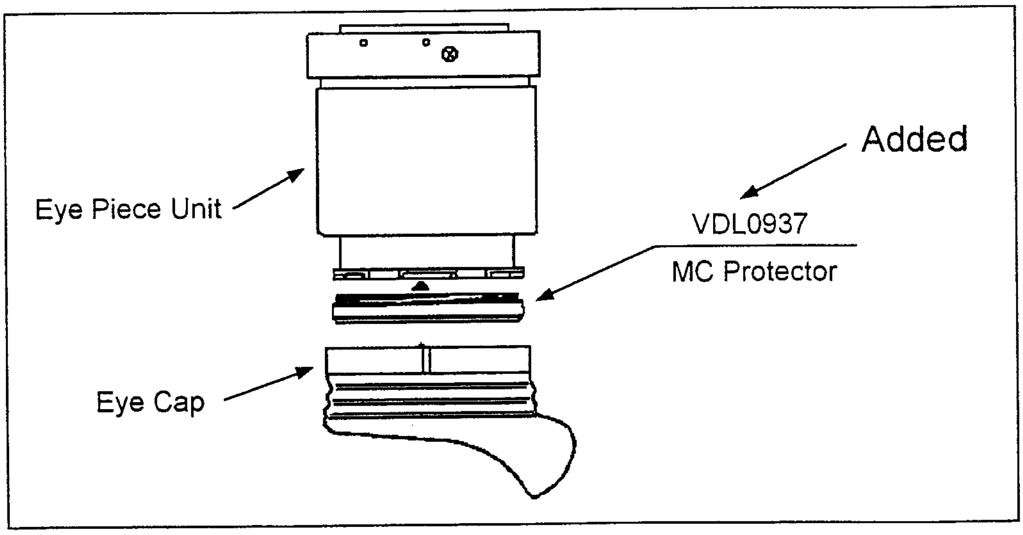
EVF Assembly

Symptom : Picture may not be appeared when the View Finder is left to be turning the Eye Piece toward the upside.

Cause : Water may come into the EVF through the Eye Piece Unit.

Remedy : To prevent it, the MC Protector (VDL0937) is added to the Eye Piece Unit as shown below.
< Installation Method >
1). Remove the Eye Piece Unit.
2). Mount and secure the MC Protector with the 52mm thread to the Eye Piece Unit as shown below.

| **Part Number** | | | | | |
|---|---|---|---|---|---|
| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
| 92 | — | VDL0937 | MC PROTECTOR | 0→1 | |



G3342TM3982

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V17728 138 021 [illegible]
[illegible]

Order No. VSD9812SB712

# Technical Bulletin

## *Supplement to the Service Manual*

**Broadcast Product**

## Subject : Addition of Tape Guide

Please use this supplement together with the Service Manual as follows :

| Model No. | Bulletin No. | Order No. | Effective from |
|---|---|---|---|
| AJ-D700E/EN | 116 | VSD9606M501A | L8TKA0001 |
| AJ-D800E/EN | 78 | VSD9708M606A | L8TKA0001 |
| AJ-D200HE | 39 | VSD9708M604 | L8TKA0001 |

Mechanical Chassis Assembly (2)

Symptom : The RF signal may be recorded only at the exit side of RF envelope.

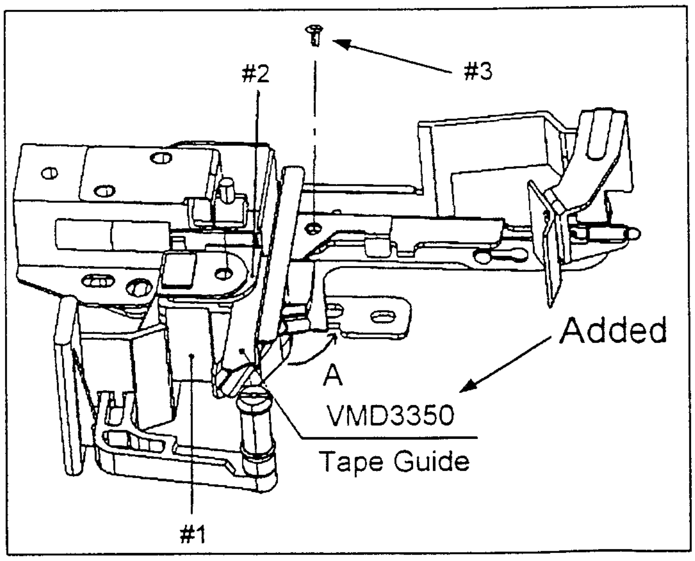
Cause : If the power is turned OFF during the tape loading, the tape may slack by the timing of turning off. If the unit is vibrated by the tape slack, the tape may take off from the S1 and S4 posts.

Remedy : To prevent the tape from taking off from the post, Tape Guide (VMD3350) is added over the tension post even if the tape is slacked.

**Part Number**

| Ref. No. | Original Part No. | New Part No. | Part Name & Descriptions | Pcs | Remarks |
|---|---|---|---|---|---|
| 60 | — | VMD3350 | TAPE GUIDE | 0→1 | |

1. Remove the screw #3.
2. Install the Tape Guide (VMD3350) between #1 and #2.
3. Tighten the screw #3 loosely with the Tape Guide and tighten the screw #3 firmly pushing the Tape Guide to an arrow direction (A).
4. Confirm that the clearance between T1 post and T1 Guide is within specification. If it is out of specification, adjust the clearance according to <T1 Guide Position Adjustment> of the Service Manual.



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